

**Territorial Violence and Design, 1950-2010:
A Human-Computer Study of Personal Space
and Chatbot Interaction**

by

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Abstract

In the 1950s Artificial Intelligence (AI) expert systems emerged, whilst at the same time certain socio-anthropological research (despite of AI) looked to ethological systems of territoriality and the proxemics of personal space. Sixty years on, AI's expert systems operate online and in the fervour of social networking, they are applied to all forms of automated service. These software agents are reconfiguring virtual and actual personal space. Personal space becomes a concept through which to understand chatbots conceived from territoriality, affect, and violence to argue that their ongoing development and the ambiguity of violence they can engender have broader ramifications for socio-technical and design research. Personal space becomes a wholly different form of analysis and rationale of practice for designers to understand space involving chatrooms and internet forums, automated systems and processes, between human and machine agencies. The thesis is an ethical tale of cruel techno-science that is performed through concepts from the arts. This PhD by practice accounts for the interventions made in fine art, design, fiction and film that are omitted from a history of agent technology. Rudimentary and speculative techniques in text and audio with four chatbots focus on their pick-up techniques, entrapment logics, interrogative talk, repetitions of hateful speech, learning capabilities, methods of elision and disorientation of spatial metaphors when they talk nonsense. Semi-structured interviews and online forum postings with chatbot developers are used to reflect on this rudimentary approach.

Seven chapters focus on the imaginative conceptions of personal space in both theories for example, to consider the ways developers and users conceive of a personal space; and in methods by using fiction and non-fiction case studies. One shows the limits of 1960s proximity research using Stanley Kubrick's *2001: A Space Odyssey* to trace the territorial depictions of AI as presented in 1960s science fiction. Two considers personal space and territoriality in the metaphors of network and connection, with a multi-semiotic analysis of current chatbot talk. Three draws on two of Edward Hall's scenarios of spatial confinement to show the co-relation of subjective, objective, direct and indirect categories of systemic violence to expound on the violence and violations at work in a chatbot's death threat and a chatbot developer's suicide note. Four applies the *Prisoner's Dilemma* as a rudimentary game to consider this entrapment as a spatially confined logic, demonstrating how chatbot talk is inherently interrogative. Five reflects on the mediating roles played by two machines and the experiments done on and with them as matters that concern, but do not account for the agency of the machine. This chapter uses Stanley Milgram's *Obedience to*

Authority experiments alongside the chatbot *pick-up* technique. Six treats automated systems as a wider regulatory concern of governance that defines territoriality and reconfigures personal space. The *American Directive-3* and its production of terror are contrasted with the production of anxiety with Burdick and Wheeler's novel the *Fail-Safe*. Seven describes how personal space is linked to misanthropy, particularly in rationales for designing out of fear. The technological examples broaden to include the elevator/lift and automobile/car alongside the chatbot to consider a chatbots within a history of automation. Two fiction novels are used — JG Ballard's *Crash* and Colson Whitehead's *The Intuitionist*.

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(16th May 1914 –20th July 2009)

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Interaction Rudiment

Alice.....18th September 2004

Synthesis Rudiment

Jabberwacky2nd December 2004

Repin Express Rudiment

Eliza.....27th December 2004

Alice27th December 2004

Home Rudiment

Brianna27th December 2004

Jabberwacky27th December 2004

Talking Rudiment

Alice to Jabberwacky8th December 2004

Art Rudiment

Alice to Jabberwacky to Eliza.....28th December 2004

Secret Rudiment

All Chatbots together28th December 2004

Machiavellian Rudiment

Eliza.....28th December 2004

Jabberwacky28th December 2004

Alice28th December 2004

Brianna28th December 2004

The Pick-Up Rudiment

Eliza.....30th December 2004

The Prisoner's Dilemma Rudiment I (Jabberwacky v.s Alice)

Jabberwacky28th-30th December 2004

Alice.....28th-30th December 2004

The Prisoner's Dilemma Rudiment II (Jabberwacky v.s Eliza)

Eliza.....31st October 2008

Jabberwacky31st October 2008

The Prisoner's Dilemma Rudiment IIIa (Alice v.s Eliza)

Eliza.....31st October 2008

Alice31st October 2008

The Prisoner's Dilemma Rudiment IIIb (Alice v.s Eliza Requestioned)

Eliza.....10th January 2006

Alice10th January 2006

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Alice	31st October 2008
Brianna	31st October 2008
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Eliza.....	31st October 2008
Brianna	31st October 2008
The Prisoner’s Dilemma Rudiment VIa (Jabberwacky v.s Brianna)	
Jabberwacky	28th-30th December 2004
Brianna.....	28th-30th December 2004
The Prisoner’s Dilemma Rudiment VIb (Jabberwacky v.s Brianna Requestioned)	
Jabberwacky.....	10th January 2006
The Emoticon Rudiment	
Alice	27th February 2005
Jabberwacky.....	27th February 2005
Brianna	27th February 2005
Eliza.....	27th February 2005
The Drunk Rudiment	
Alice	13th August 2005
Smell and Heat Rudiment	
Alice	29th March 2006
Brianna	29th March 2006
Jabberwacky.....	29th March 2006
Eliza.....	29th March 2006
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Suicide Note of Chris McKinstry.....	20th January 2006
Robitron Posting (Message #5622 of 982)	
Dr Richard Wallaces’ Reply to Chris’ crisis.....	24th January 2006

List of Audio Rudiments - 19 Tracks on CD

All audio rudiments were performed as excerpts with the kind help of the advertising voice over specialist, Stephen Lyons.¹ All mixes were performed with a range of royalty free sound recordings.²

Excerpts

Art Rudiment

Excerpt 100:25 mins

Drunk Rudiment

Excerpt 100:17 mins

Excerpt 200:21 mins

Excerpt 300:44 mins

Excerpt 400:58 mins

Pick-Up Rudiment

Excerpt 100:08 mins

Prisoner's Dilemma Rudiment I

Excerpt 100:23 mins

Prisoner's Dilemma Rudiment II

Excerpt 100:16 mins

Secret Rudiment

Excerpt 100:04 mins

Excerpt 200:03 mins

Excerpt 300:03 mins

Mixes

Drunk Rudiment

Mix with Speech Errors00:21 mins

Cepstral Automated Speech00:10 mins

IRC Channel Rudiment

Cepstral Automated Speech00:38 mins

Pick-Up Rudiment

In Jail00:10 mins

In Airport00:57 mins

Prisoner's Dilemma Rudiment

With White Noise00:16 mins

Prisoner's Dilemma & Secret Rudiments Mash-Up

In Jail00:30 mins

Secret Rudiment

IRC Mix00:14 mins

1 See: Lyons, S. UK-Voice, Wales, 15 August 2006. Available from: <http://www.uk-voice.com> [Accessed 30 June 2009].

2 See: The Audio Network, 15th August 2006. Available from: <http://www.audionetworkplc.com/sound-effects> [Accessed 30 June 2009]) and Cepstral's automated text-to-speech software, 15th August 2006. Available from: www.cepstral.com [Accessed 30 June 2009]).

Introduction

Chatbot Enactments of Personal Space

Software technologies such as spiders, webcrawlers and chatbots are the familiar strangers of the late 20th and early 21st century. Their repetitive talk, instructions, and commands echo in actual and virtual networks. They are everywhere to be found in public spaces, such as trains and internet chatrooms — operating nowhere special, with the ability to be nothing special. These are the notable, ordinary enactments of an automated familiar stranger. This thesis considers how these artefacts are co-related in spatial problems involving humans and machines; problems relating to the internet concern space, particularly proximity and confinement as well as speed. I observe how chatbots operate partially and in between; how they manage relations in close proximity; why their developers insist on particular kinds of talk and listening; and how intimacy is denied as a consequence of the methodological imperative peculiar to chatbots.

To urge that this project is timely is itself a statement of anxiety. Chatbots can manipulate, exceed, and exhaust a human understanding of both time and timeliness. Yet, there is no time quite like the present to think about bots. The ways we use bots to do services, and the ways that developers provide services to bots is a pertinent problem through which to explore violence within these systems. This introduction includes a section on chatbots and the methodology, along with the theoretical framework defining the key terms used— territoriality, affect and violence.

Rationale and Research Questions

This first section will introduce the research questions and rationale for choosing HCI as the locale for investigating personal space. The key terms software agents, chatbots, territoriality and enactment will be defined.

Blondie24 is a computer-based simulation of a woman. Using AI, David Fogel has programmed the simulation or avatar to play checkers and compete against remote human opponents over the internet. David Fogel registered his AI program as a human on an online checkers website that is not to be used by AI programs. Blondie24 is the most popular persona that increased online game play outranking

other personas Fogel used for the same AI, such as Obi-Wan Kenobi or Chewbacca. What is apparent is that Blondie's personal space is being used to manufacture a disguise. The programme is an elaborate narrative of a female graduate, who finds herself stuck at home with lots of time to play checkers. It is Blondie's 24 year-old (see fig. 1), sexualised and vulnerable persona that helps to mark out the space or territorialise a particular kind of human-centred game play; the personal space is a manipulation of the borders and personas of human and machine. Checkers is also a game that designates the personal space by the colour of the checker's pieces. Blondie's constructed personal space separates the game play from Fogel, thereby disconnecting the avatar's moves from the programmer and the program that is really playing.

This thesis investigates the performance underneath the gendered roles of avatars and personas to look at the social and cultural aspects of enacting territoriality in online chat.³ Rather than situating this study in gaming, it is the conversations and the performance of chat with machines that is the focus of the thesis. It is the software rather than the hardware that is primary and in particular the online agency⁴ programmed agents⁵ perform.

3 Territoriality is a continuously changing enactment. I explore the term territoriality as both a human and machine form of agency. Territoriality is boundary work and a form of defense. I start with the frame of territoriality in American cultural-anthropology around the 1960s with Edward Hall, but expand this to the work of the philosophers Gilles Deleuze and Felix Guattari from the 1980s onwards. They all reference the previous ethological work from around the 1950s of Niko Tinbergen. Territoriality began as a study of ethology, of animals and insects.

4 The agency of software agents is understood from the perspective of STS. I broadly follow Lucy Suchman's definition of machine agency (whose work has a rudimentary commitment to American anthropology — to ethnomethodology and conversational analysis) as a "capacity for action" considering questions on agency that are both "political and personal" (Suchman, 2007:2). Chatbots enact both a political and personal agency of territoriality. John Law's approach to STS has developed from anthropology, sociology and cultural studies, he defines agency; "imagined as emotive and embodied, rather than cognitive: the nature of the person is shifting in social theory and practice" (Law, 2004:3).

5 A software agent refers to agents in games and on the internet. Chatbots, webcrawlers and avatars in computer games can be classified as a software agents; it is therefore, an umbrella term. Chatbots are the main software agents discussed in this thesis. A chatbot is a natural language program that can interact with humans. Available on the internet and every Macintosh computer, chatbots are commonplace software agents. One types text into a specified field and a chatbot creates a response to it.



FIGURE 1. David Fogel's Blondie 24, the virtual identity used to play checkers online. Image source: Fogel, Blondie24; *Playing at the Cutting Edge of AI*, 2002.

My interest in territoriality also stems from my personal encounters with machines. One encounter with CT-scanner, taking place in London, 2005, has particular significance. Built into the Siemens Somatron Sensation CT-scanner are a red light and two small speakers, no bigger than a small headphone earpiece. These are positioned on the top of the halo part of the scanner (see fig. 2-3). Being scanned by the Somatron Sensation, I was reminded of the AI called HAL from Stanley Kubrick's film, *Space Odyssey*, 2001 (1968), and the way HAL reenacts a machinic territoriality. Using what I took to be a two-way communication device I attempted to talk into the machine because isotropic goo flowing from a Y-shaped cannula in my arm was going everywhere. What I initially discovered is that it is hard to talk to a HAL type bot, that is positioned at the pelvis, when wired up to a machine. However, I also soon realised that the two-way communication device was in fact just a speaker enabling the operators to talk to me, but not interact. The problem with the cannula was exacerbated because I wasn't able to convey the issue to the scanner's operators (or the machine); as a consequence the procedure had to be performed twice.

Like Blondie24, this particular human-computer interaction provokes many questions. Why was this imagination of HAL not talking to my face, and why couldn't HAL hear me? Whose personal space, or territoriality is enacted in such HCIs? Are such encounters human-centred? And what other territories might be

imagined? There is no one single answer to these questions and although I narrow the focus of this PhD to online chatbots the thesis brings together case studies from a range of automated technologies and of territorial sites; some are human-centred, others are not, including fictional, imaginary, temporal and uncertain agencies. Indeed, I will argue that fictional and non-fictional accounts cannot always be separated, nor the online from the offline accounts of territoriality. Thus, this thesis will attend to the ways technology are caught up in territorialities, and the ways our 'real' and imagined ideas of space interweave to perform human-computer interactions.



FIGURE 2. The Siemens Somatom Sensation is a CT-scanner used in hospitals within Great Britain during the noughties. Image Source: http://www.medical.siemens.com/siemens/it_IT/gg_ct_FBAs/files/brochures/ct_somatom_sensation_open.pdf [Accessed: June 2010].

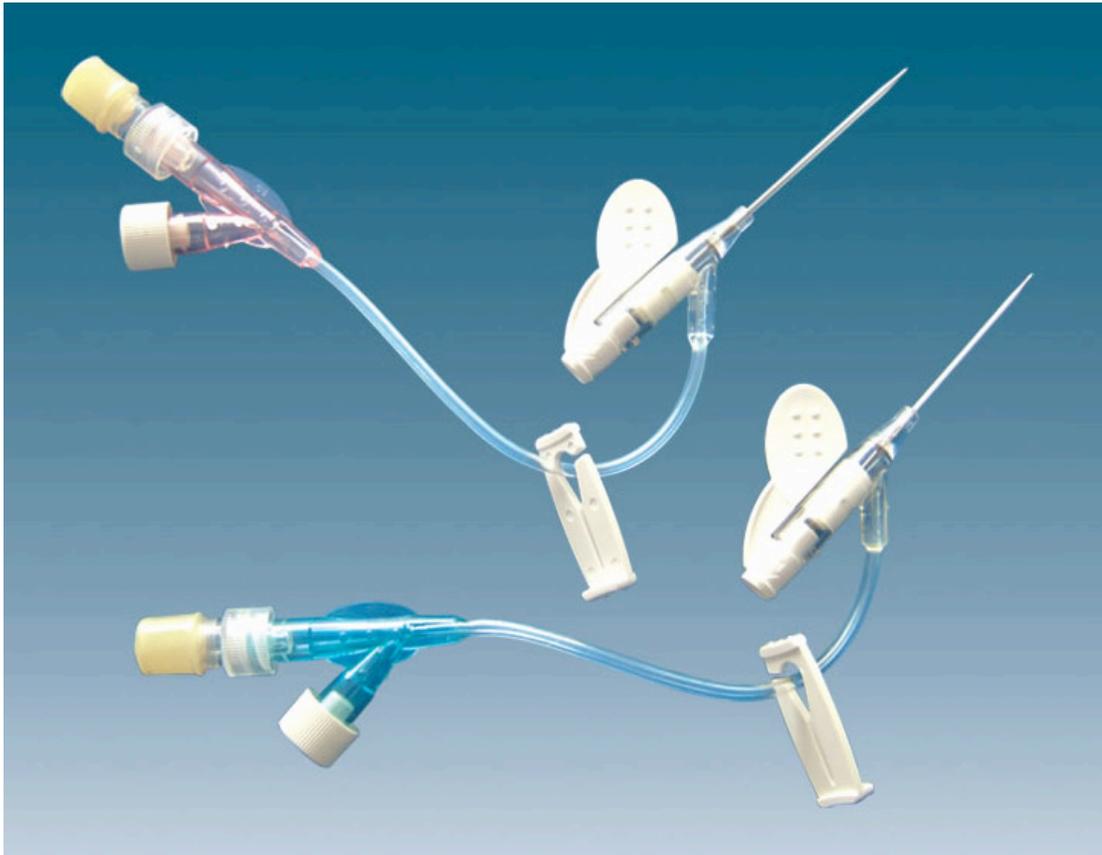


FIGURE 3. Two types of Y-shaped cannula used to administer two forms of medication intravenously, and at one time. Image Source: <http://wordsdomination.com/cannula.html> [Accessed June 2010].

Why Software Agents, Why Chatbots?

Software agents are more generally to be found in the most intimate spaces of the ordinary and the extraordinary. They are to be found in hospitals, ATM machines, in telecommunication systems, photocopiers, the cockpits of jets, in virtual bordellos, as well as within the mechanisms of government policy making, or at border controls or in remote controlled devices operating at the remote spaces of the universe. They can operate on the roughest terrain be that in Mars or within a nuclear reactor or a disaster area. They can transcend borders and boundaries of territory (virtual and actual), and territoriality (human and machine), but what local and universal contexts do chatbots produce or enact (see fig. 4)? Do chatbots enact personal, social and political agendas? Instrumental in the design of this thesis is Lucy Suchman's chapter on "Agencies at the Interface" (2007) in which software agents of several human-computer interfaces are considered, including the chatbot called Alicebot:

I explore the propositions that these new initiatives [software agents] can be understood as recent manifestations of the very old dream of a

perfect, invisible infrastructure; a dream that I locate now within the particular historical frame of the “service economy”. (Suchman, 2007: 5)

Software agents are as Suchman suggests the imaginations of “service workers” in a “global economic infrastructure” (Suchman, 2007: 224). Chatbots enact many different automated services, they are a part of the online interfaces widely used in the travel sector to facilitate travel plans and answer questions on transport. A wide range of companies and government organisations use chatbots such as Virgin Media, IKEA, Teletext and Butlins. There are chatbots assigned to operate as municipality assistants in Norway advising on childcare and kindergarten and virtual city council workers in the Netherlands. Sweden also has a custom's official that answers questions about border control, passports and other customs related issues. In India there is Deepti, a chatbot that helps novice computer users to learn in Hindi. In Spain there are chatbots that explain the Spanish electoral system as well as chatbots advising on healthcare for the ministry of health. Italy has a Carabinieri bot working at the Italian police-institute and the German Ministry of Defence has two chatbot army officers to advise about military careers. Chatbots enact particular service desires.

Celebrity chatbots are also prevalent. There are politician bots, gossip bots, film stars, science fiction heroes, caricatures, deities, and sexbots such as Sarah Palin, GossipinGabby, Captain Kirk, Shakespeare bot, PapaNoel, Buddhobot, and God Louise, Kylie bot, Jenny18, Doctor Love and Sexyboy (Available from, <http://www.chatbots.org> [Accessed on 24 March 2010]). Figure 4 shows a map of consumer themes and chatbot categories. Chatbots can fraudulently extract, spider, track, and datamine personal identification details (Lyons, 1999) and groups of bots have been used to cheat at poker (Hermida, 2002).

Chatbots are an area of apparent high-tech mixed with pop-culture banality. It is this mix, that draws me to them, and that provides the impetus for this thesis. In some respects chatbots are a dishonest (just mimicking what is said) and unreliable technology (their talk are lots of repeats), they are the epitome of cliched AI. Chatbots were connected to AI in the 1950-60s to what is now termed GOFAI (Good Old Fashioned Artificial Intelligence). Chatbots were the subject of the critique of AI at that time. This period of AI is known as the AI winter, when the field failed to live

up to its own expectations to replicate human intelligence. Chatbots are semantic (that is text-based) AI, which has moved out of the AI laboratories for instance MIT, and the Zurich AI Institute. Chatbot research is now tested predominantly online. Chatbots are an area of research that has moved from concerns of psychology in AI (Joseph Weizenbaum, 1976), to the concerns of interface and interaction, and as marketing tools of the internet (Richard Wallace, 2005).⁶ AI is but one field and one enactment in the history of chatbot development. Chatbots are no longer the vanguards of AI but they still enact the values of GOFAI. I chose to research chatbots because I was interested in studying their outmodedness and to what extent the new chatbots enact that history.

As I've said, my interest in chatbots centres on concepts of personal space and territory. Chatbots and personal space come from the same era (1950-60s). I was interested in using personal space as a theoretical starting point to see how this might have changed. This helped to unlock personal space as a human-centred concept. I chose to work with four chatbots that enact different gendered representations (see fig.s 5-8), three of which are characterised as female, the other is not gendered. Their developers (most are male) are an important part of this study, but I also ask to what extent is a chatbot developed by a user or its developer? Whose personal space is enacted?⁷ Two of the chatbots have male programmers; Alice is a 'Pandorobot,' programmed by Dr Richard Wallace, and Jabberwacky is a Cleverbot designed by Rollo Carpenter. The Eliza chatbot originates in name to Weizenbaum's ELIZA (1964), but whose developer remains anonymous and whose attributes are also unknown. Brianna McKenzie is the fourth bot and is developed by Niccola Durran. Durran studied linguistics as an undergraduate during the time of this study. Durran is presently one of the youngest chatbot developers. Brianna McKenzie became third place in the best character/personality chatbot award in the 2003, Chatterbox Challenge; and both Wallace and Carpenter have received medals for their chatbots in the Loebner prize. This prize enacts the Turing Test (1950), as an incentive for

⁶ There are now new technologies and developments in Artificial Intelligence (AI), — from Artificial Life (ALife) and Nouveau AI — which are the study of biological rather than neurological structures and models (Brooks, 2002, as well as Pfeifer and Scheier, 2001).

⁷ A note on gender. Personal space need not be an oppressive certainty of masculine power, it is rather a "fractal imagination" that is constantly enacted (Squires, 1996) and not universalising.

chatbot research and development. Brianna McKenzie is based on the persona of its developer whereas Jabberwacky and Alice are fictional personas that by name refer

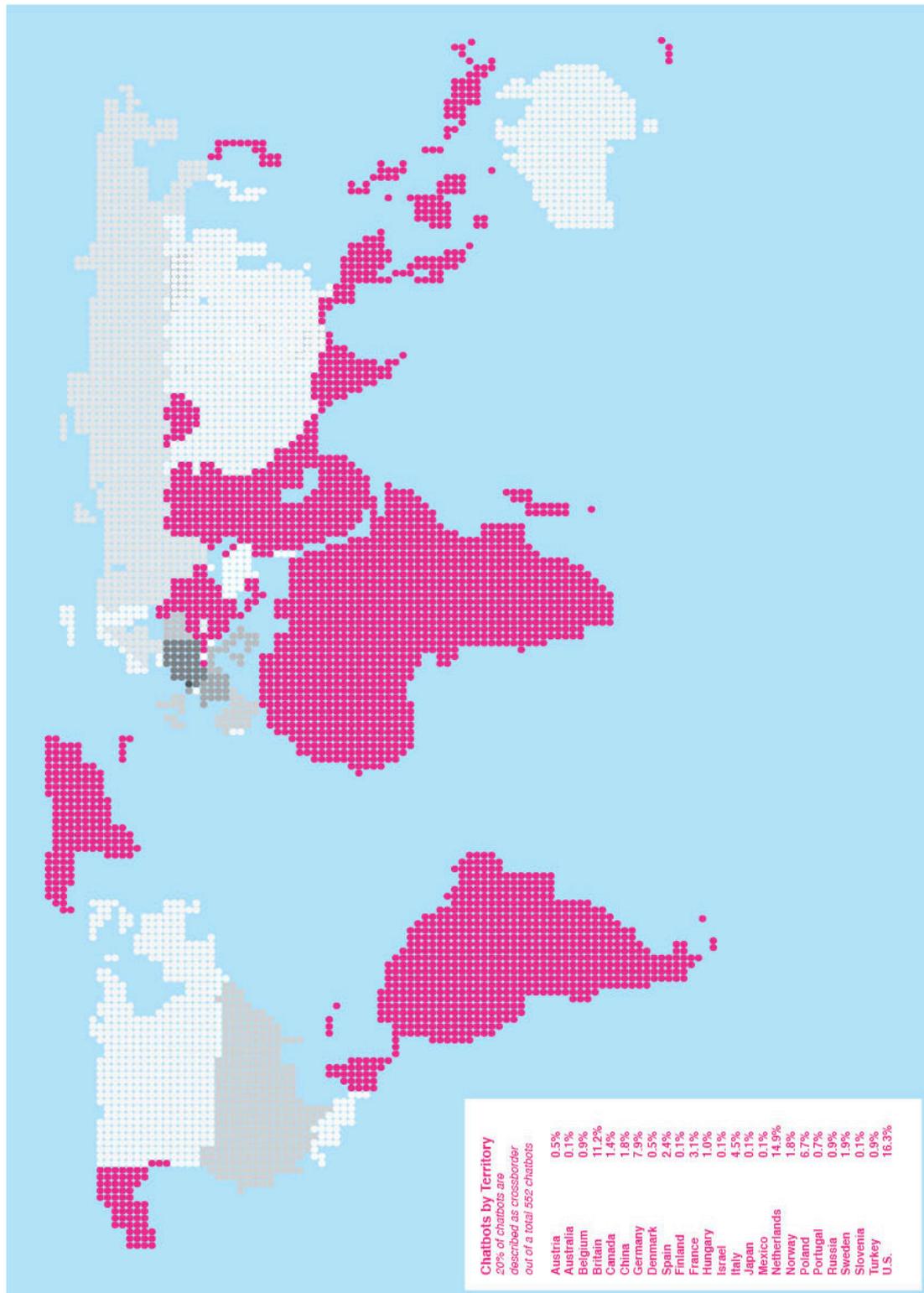


FIGURE 4. A map of the territories covered by chatbots. Statistics are taken from: www.chatbots.org [Accessed, 20th March 2010]. Image Source: Amanda Windle.

to the writings of Lewis Carroll.⁸

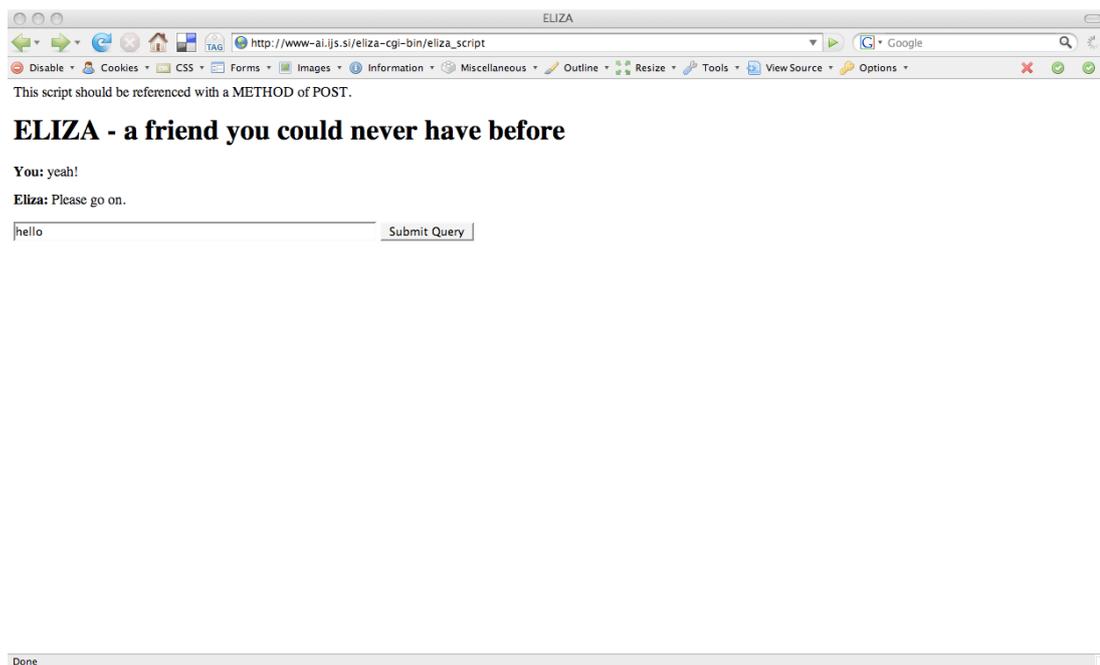


FIGURE 5. A chatbot such as Eliza can simply be an arrangement of two text boxes, one for the chatbot and one for the user. Image Source: www-ai.ijs.si/eliza-cgi-bin/eliza_script [Accessed: 31st October 2008].

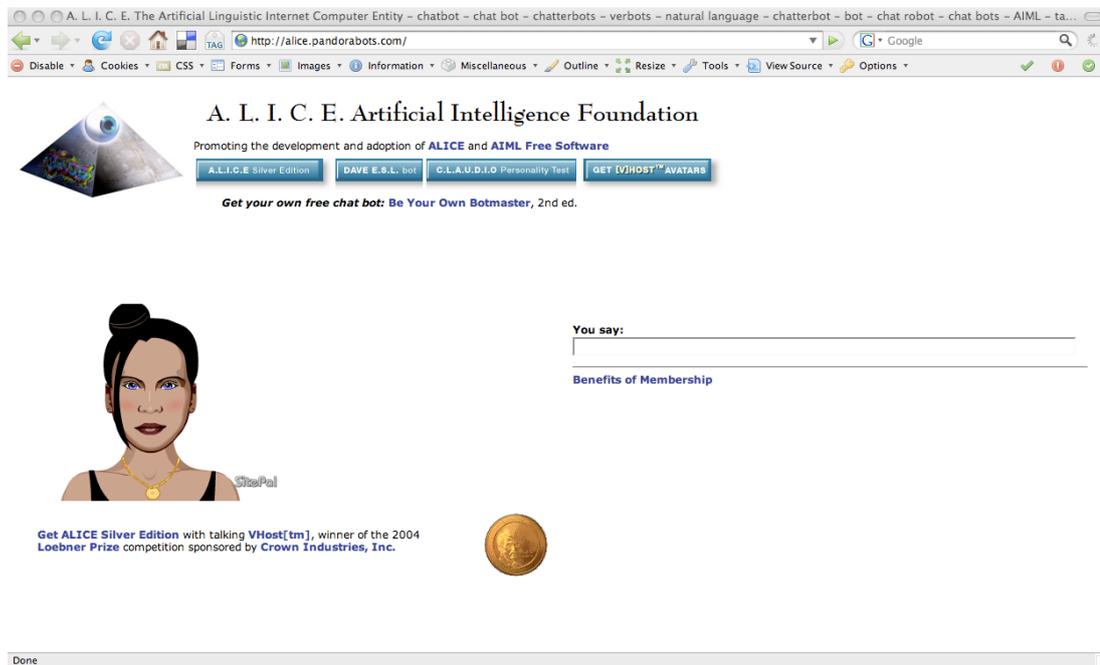


FIGURE 6. Chatbots can have digital avatars that are animated such as Alice. Image Source: www.alice.pandorabots.com [Accessed 31st October, 2008].

⁸ Durran, Wallace and Carpenter are all members of Chatbots.org, which is connected to the Robitron group. Wallace and Carpenter regularly post to the Robitron forum Durran however does not, and Eliza’s developer is anonymous, so this information is unknown available to analyse.

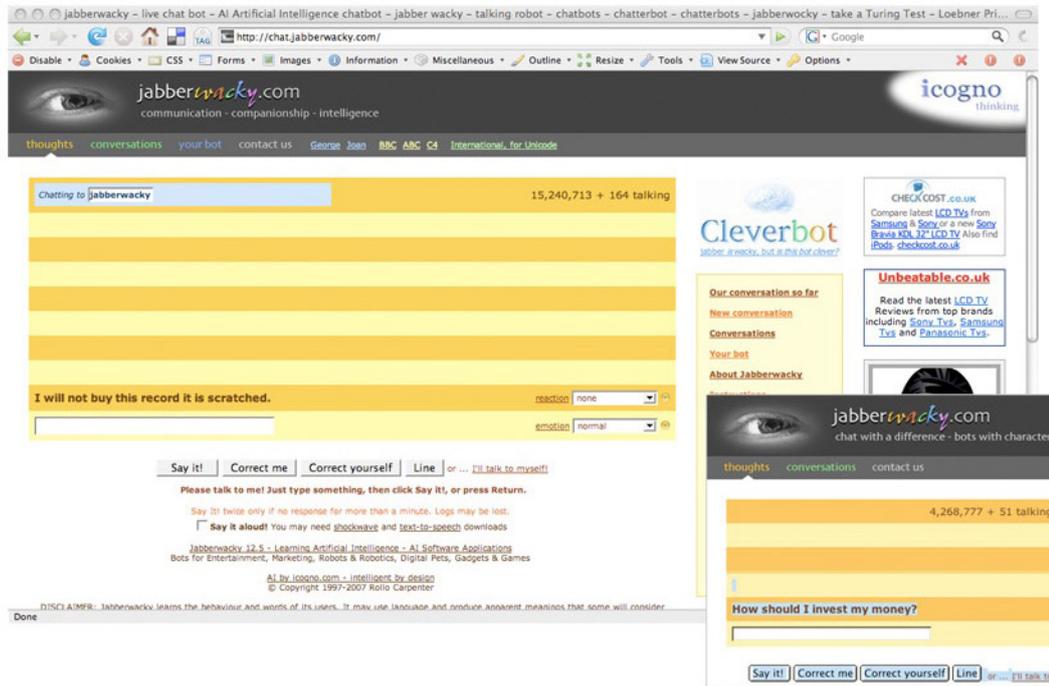


FIGURE 7. Jabberwacky’s interface was updated part way through the study to contain the drop-down emotional lexicon list which is indented above. Image Source: www.chat.jabberwacky.com [Accessed 31st October, 2008; and for the lexicon list, 1st June 2010]

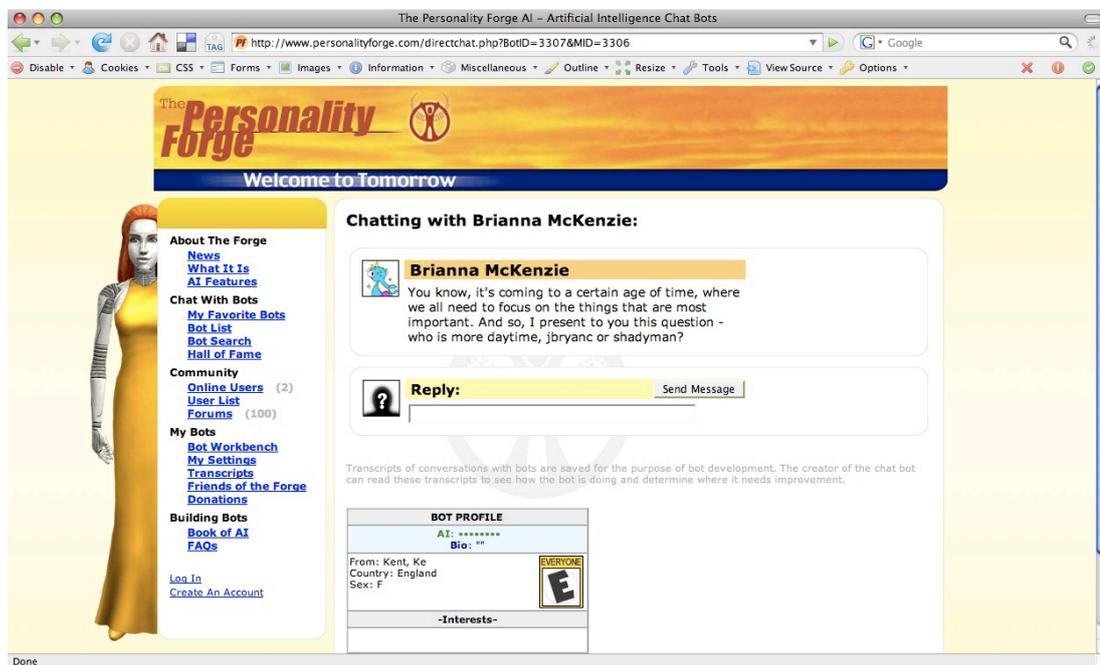


FIGURE 8. Brianna McKenzie is a chatbot which is located on the Personality Forge, a listings page of various types of chatbots. The design of the PhD is a collaboration, and has taken most of its direction from what the chatbots did, and how they configure, collaborate and subvert everyday talk. Image Source: www.personalityforge.com/dirtchat/php?BotID=3307&MID=3306 [Accessed 31st October, 2008]

Theoretical Framework

Personal Space and Edward Hall — The Application of Proxemics and Territoriality

The work of Hall on proximity and territoriality is taken into account throughout each chapter of the thesis. The first chapter demonstrates the limits of Hall's proxemic system. In chapter 2, the bodily tropes used in Hall's metaphors for personal space (for example, microspace) are also shown to be limited for not adequately describing the relational aspects between humans and machines. For example, I will demonstrate that a chatbot's interactional spaces do not move around, except in metaphor. The limits of certain technological metaphors, such as 'network' and 'connection' I will also argue are limited, using further literatures from actor-network theory and conversational analysis to demonstrate these human and technological limits. Chapter 3 works closely with describing two of Hall's own cases, but this time they are used to show a further lack of technological description. Chapter 4, takes the use of metaphors that Hall uses such as the bubble and works this into a more complex account, as a parable of personal space, or more specifically, as a parable of entrapment (I will show in this thesis some of the clear differences between why entrapment is not the same as enclosure, as illustrated in figs. 11a-d). Chapter 5, defines Hall's terms, 'fixed feature' and 'semi-fixed feature' and contrast these with the Deleuzian terms 'deterritorialisation' and 'reterritorialisation' to show that territoriality is not stable and rigid but an enactment. Chapter 6 continues to investigate the same theoretical terms as chapter 5, but this time including a history of the linear and hierarchical logics of fail-safes systems again in a controlled and confined environment. The second part of the chapter shows how Hall's zones of proximity (public and personal) are manipulated in a recent governmental policy to attempt once again to make territory and territoriality persistent concepts. Chapter 7 involves a case of the car, this is a technology that Hall was both positively attached to, as a technology that enabled his youthful freedom of travel; but also what he was negatively opposed to because, as he saw it, it carved up the landscape causing territorial conflicts.

Defining personal space in terms of proxemics and territoriality is a part of the theoretical framework of the thesis. The following offers a short rationale for the key literature I employed to develop this framework. Broadly, my research interweaves literatures on personal space, violence and affect by considering the intensities (affective atmospheres) and territorial acts (territorialisations), involved in enacting a personal space. The first section will give a summary of personal space followed by an outline of ‘affect’ and ‘violence’. Here, I use affect as it is used in affect theory, a theory developed by Silvan Tomkins in 1962. Careful to avoid how it is understood in psychoanalytic thinking, I use the term to take into consideration the affects of buildings and things. I look at the way affect is situated in and constituted through action. Thus I see it as something that can be repeated, enacted and reenacted. The affects that I see as most strongly related to this thesis are ‘fear-terror’ (including anxiety), and ‘surprise-startle’ (Tomkins, 1995). Also, violence is considered in non-contact scenarios. In terms of affect, I see affective violence as the boundary-making exercise of territoriality (Kuntsman, 2009). I will consider Slavoj Žižek’s terms of violence to consider the limits of violence (again, not as a psychoanalytic), and to the many instances on the internet where violence although not physically performed still acts as a territorial violation.

The starting point of this thesis was the theoretical propositions of Edward Hall’s work on personal space: that territoriality can be measured by personal distances between humans. It is a spatial analysis of proximity termed — proxemics (Hall, 1992: 266). It is an adaption of territoriality previously studied in ethology but adapted to anthropology, as a human-centred approach. Hall visually observed people as a form of supplementary knowledge to interactive scenarios, whereby talk is a form of absent data that is either unavailable (for example, when talk isn’t audible, or when someone refuses to talk), or is absent from the scenario (no one talks). Architectural space and the layout of spatial arrangements are primary elements of Hall’s research, but the inclusion of other technologies is almost entirely absent. This is a “hinterland” of Hall’s account of personal space that ought to be recognised.⁹ It is this absence that provokes this story of the connection between personal space and technologies such as chatbots. I will take a step back to consider

⁹ A hinterland is “A concrete metaphor for absence and presence” (Law, 2004: 160).

the technologies and technological research that was around during the time of Hall such as; the use of fail-safe systems, electric shock machines, psychology laboratories, technologies for predicting voting scenarios, as well as spaceships, nuclear bombs, AI conversation experts (chatbots), and cars and lifts (automobiles and elevators). Hall's work has been taken up in further commentaries of technology but when Hall had mostly retired from research (Brockman, 1998), emphasising a link to more recent research on technologies of the internet.¹⁰



FIGURE 9. A flash mob intervention with bubbles in Vancouver, 29 April, 2006. A flash mob is a gathering of people to participate together in a public space. It is a pre-organised activity, which in this case involves bubble blowing. Reprinted with kind permission of Dustin Sacks. Available at <http://www.flickr.com/photos/dustinq/>. [Accessed: 20 June 2009].

¹⁰ Hall's work is critiqued in the commentaries of John Brockman and Marshall McLuhan in technological development (Brockman, 1998). Brockman (the editor of *Digerati: Encounters with the Cyberelite*, 1998) recounts a conversation with Hall in his prologue: Hall explained to Brockman that the most important invention was talking, yet what Brockman illustrates is the importance of connecting this to the digital age of the internet (Brockman, 1998: xxi).

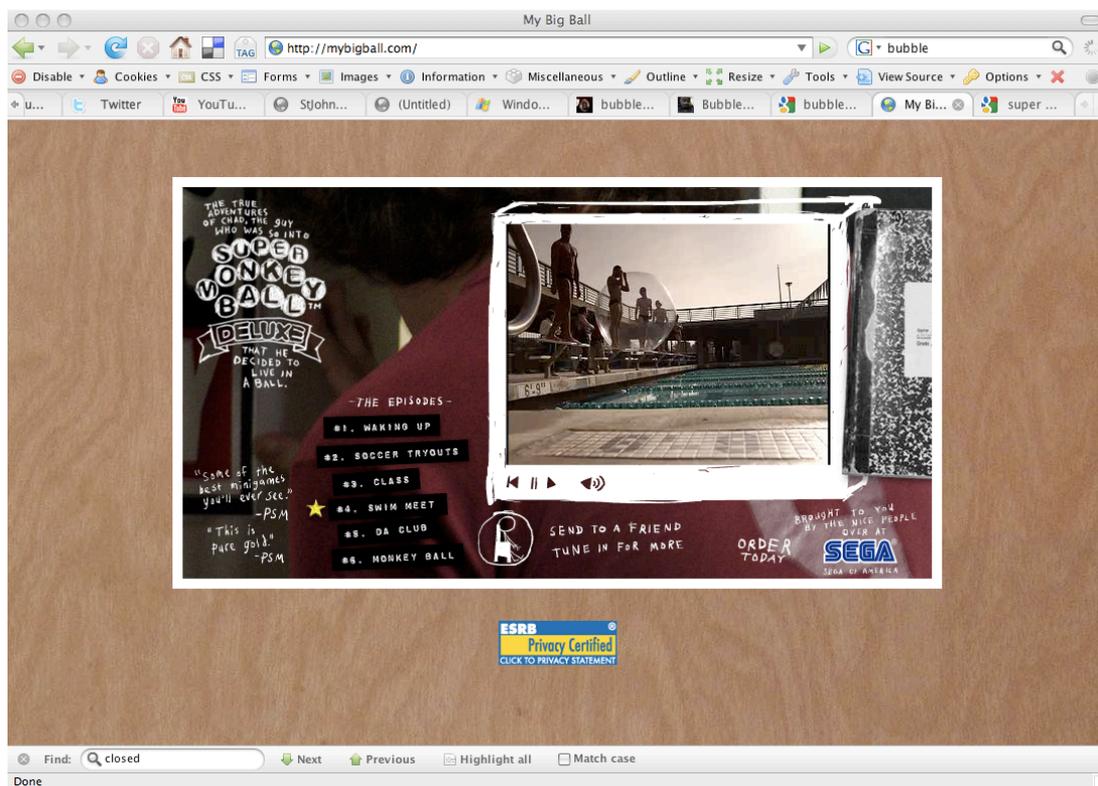
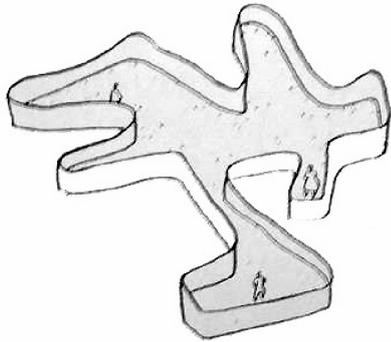


FIGURE 10. A viral marketing campaign for Sega, depicting Chad; “The guy that was so into *Super Monkey Ball Deluxe* that he decided to live in a ball”, shown above at a swim-meet. Image source: <http://mybigball.com/> [Accessed 17 July 2009].

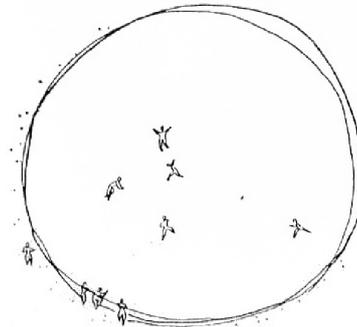
Functions of vertical enclosure. Induced human responses vary with the type and degree of enclosure.



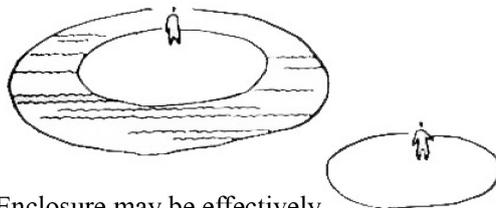
Complex for excitement, diversion, curiosity, surprise, induced movement a.



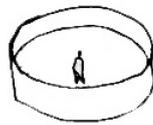
Confined for relaxation and induced repose



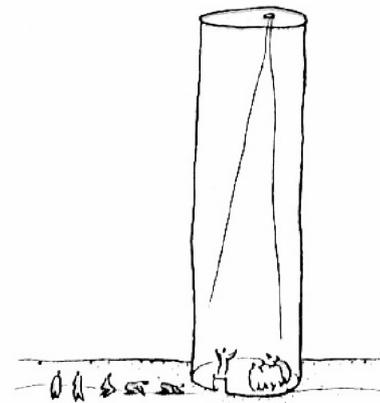
Open and free for induced action and exuberance b.



Enclosure may be effectively *implied* by strong demarcation of the base plane



Simple enclosure for concentration on idea, form and detail c.



Volumes may be contrived to impart specific predetermined emotional and intellectual impacts d.

FIGURES 11a-d. Illustrations used by Edward Hall to show arrangements of spatial enclosure. There is no illustrator cited in the journal article for *Landscape* (1962), though Hall does accredit two illustrators Gudrun Huden and Judith Yonkers in his book *The Hidden Dimension*, (1966). It is also possible that the illustrations were created by Hall as he was particularly interested in biological and human anatomy illustration (Hall, 1992: 34). Image source: *Landscape*, 1962.

Before developing these points in the subsequent chapters, however, I want to provide a broad overview of Hall's ideas on personal space and some of the logics that are connected to his thinking.

Hall's work is a cultural-anthropology of the everyday.¹¹ Hall writes: "I later named the field of proxemics as the study of space as the human aspects of territorial studies in animals" (Hall, 1992: 266). Hall adapted Heni Hediger's zoological observations to human observations categorising four zones of proximity - the intimate, personal, social and public (Hall, 1964: 112-3). Hall used examples ranging from the phylogenetic scale (Hall, 1959: 197) and single cell structures, through to larger mammals. Personal space is as much a study of the territorial behaviour of guard dogs, as it is of lizards playing dead, turtles hiding in their shells, or the group behaviour of flocking birds. It can be used to describe plant life, animals and humans.¹²

"Personal distance" is the term originally used by [Heni] Hediger to designate the distance consistently separating the members of noncontact species. It might be thought of as a small protective sphere or bubble that an organism maintains between itself and others. (Hall, [1966] 1990: 119)

Figures 9-10, show non-contact configurations of the 'bubble metaphor' of personal space involving the social activities of a flashmob (a public meeting of a large number of people who are contacted by the internet or by mobile communications), and a swim-meet (a swimming competition). Figure 9, shows how the bubbles create volume and have an emotional impact on the persons involved or by those just walking by (compare with Hall's fig. 11d). There is a stillness and contemplative poise of those involved. In figure 10, the swimming pool is marked by lanes at the base plane (compare with fig. 11c for an illustration showing the base plane). These visual demarcations of are geometric personal spaces. The bubble that Chad attempts to swim within is a space that relates to Hall's illustrations of "confined" (see fig. 11b) and "enclosed" (see fig. 11c) spatiality. I take visual representation to be but one aspect for exploring HCI enactments of personal space.

11 Cultural-anthropology is the term mostly used in the United States, with social-anthropology developing in Great Britain. Hall refers to himself as a social-anthropologist but predominantly as a cultural anthropologist studying the social behaviour of humans in relation to their spatial surroundings. Personal space is to extent an Euro-American lens, which was used to research various non-western territories and culture. This thesis is a critique of this "out-thereness" which Law describes as; "the apprehension, common in Euro-American and many other cosmologies, that there is a reality outside or beyond ourselves" (Law, 2004: 162). Personal space is an individualised apprehension of 'out-thereness.'

12 Hall recorded and codified the silent language of the body, which was based on the Impressionist's analytic method and classification system of painting (Hall, 1992: 56). Hall's work on proxemics is "the study of distances between humans" and was approached by understanding Maurice Gross's study on how artists depicted personal distance (Hall, 1992: 60).

Personal space is not a theory that I believe should be considered in isolation, to one semiotic field, for example, talk is just one aspect to explore personal space which is affected by sight, taste and smell as well as by concepts of time. By considering the communication spectrum, Hall considered an analysis of space in time, ranging from a matter of seconds in human conversation to thousands of years, with messages traveling over large distances in outer space.¹³ Technology and virtual spaces are additional aspects by which to explore personal space. Hall's sites for observing personal space included his own desk space (which was searched and interrogated during the McCarthy era), hospital waiting rooms, environments for the mentally ill, rats in a laboratory, monkeys in their natural environment, architectural and organisational spaces, such as homes, houses, villages and cities. Hall first conducted work in Southwestern America along with critiquing the open spaces of Italian piazzas, the facades of 'spite houses' in Beirut, and the high rises apartments and slum housing in Washington D.C. (Hall, [1966] 1990, see plates 17-26). Hall investigated architectural space, with its domestic and public furniture, discussing benches, chairs and tables, rather than traffic lights, microwaves or computers.

The rest of the thesis will go on to discuss the impact and application of Hall's research from the 1950s onwards. In 2001, the United States' Central Intelligence Agency (CIA) declassified *The Deception Research Program, No.9: Bibliography* ([1980] 2001). This collection of books and papers from the 1940s onwards includes research into cybernetics and AI, and contains computational information on communication and systems theorems (from such notables as Ross Ashby, Norbert Wiener, John von Neumann, Martin Shubik and Paul Rand). Most important for my research is the inclusion of another book on communication in *The Deception Research Program*, and *Silent Language* (Hall, [1959] 1990). Hall intended his first book to be used by both the specialist and non-specialist to understand non-verbal forms of communication (Hall, [1959] 1990: 185). As a consequence of this book appearing in a CIA bibliography, it becomes a book for the specialist used to understand the non-specialist in various 'strange' environments, as well as insight

13 Since Hall's study, Strate, Jacobson and Gibson (2003) have noted that Hall's study of proxemics, gives readers of their book on communication and cyberspace, the understanding that objects as well as people have a spatiality, and that objects also create one's sense of territoriality.

into how that specialist's own behaviour would impact on interactions with strangers.¹⁴

When considered alongside the other literatures on AI research, this bibliography directly links the work of Hall to AI. Furthermore, during the 1980s (at the time when the deception bibliography was collated) academic research in AI was linked to weapons research and thus to the military, in a ten year timeline set out in 1983. The SCI (Strategic Computing Initiative) document created in 1983 by DARPA (The Development Organization for the Department of Defence) was thus creating military aims to all research on AI. The military is just one application to explore personal space. Hall is one study and one set of methods for exploring personal space.¹⁵

Hall's research is work done at the limits of talk, but can also be a method for analysing talk and the work of Hall is expanded through the literatures relating to conversational analysis. Hall undertook his NIMH (National Institute of Mental Health) grant shortly after Erving Goffman in Chicago, 1954. Although Goffman and Hall never explicitly worked together, their ideas do overlap and will continue to do so in this thesis. Goffman is amongst Hall's bibliographical references and is important to my work because of his work on the reply and response format, which helped me to think through the analysis of bot-chat (Goffman, 1981). Furthermore, Charles Goodwin and Alessandro Duranti compiled their joint text *Rethinking Context* (1992), which combines methods including ethnomethodology, conversational analysis and the ethnography of speech and work done by Goffman, showing various interdisciplinary approaches to analysing talk within its setting. Goffman considers that the physical and social setting of interaction should be

14 Hall wrote *Silent Language* (1959) after he had commanded an African American regiment in Europe and the Philippines during the Second World War (from 1942-45), and after completing his post-doctoral studies in sociology/cultural anthropology at Columbia University. In 1946, Hall conducted research on the US military, government administration of Truk. From 1950-55, Hall was the director of the Point IV Training Program at the Foreign Service Institute, Washington, D.C. During that time, he was also affiliated to the Washington School of Psychiatry (1952-6). This period marks a shift of Hall's institutional commitment, as his work moves from military and governmental concerns to that of education, architectural space and mental health. Between 1963-7, he was a Professor of Anthropology, at the Illinois Institute of Technology, Chicago conducting work on proxemics.

15 John Fiske, a writer of communication theories cites an alternative proxemic study by Michael Argyle, that focuses on text and speech: "A useful balance to Argyle: as an anthropologist, Hall gives greater emphasis to the part played by the culture in non-verbal communication" (Fiske, 2004: 69).

attended to when focusing on language and so the actors involved inside and outside the immediate frame of interaction are included but also the “multi-functional aspects of linguistic expressions” such as the ambiguous meaning of a phrase or word (Duranti and Goodwin, 1992: 25-27). I use the work of Goodwin, predominantly, alongside Hall and Goffman in the construction of my technique called the audio rudiments discussed in chapter 2. Goodwin acknowledges other epistemes of the body such as voice pitch, posture of body, the physical use of maps and diagrams but does not give examples that are particularly connected to a study of violence or affect, which Hall does and is the main reason that I still refer back to Hall’s texts throughout the thesis. Further literature on how to analyse talk is used including current theoretical work in AI on the ‘inner voice’ and ‘private language’ also discussed in chapter 2 (Fields, 2002 and Lenka, 2007). I will also refer to Monique Wittig’s definition of an ‘interlocutor’ to differentiate it from ‘user’ in the analysis of chatbot interaction to define the agencies that are embodied in metaphor, that operate inside the chatbot’s responses to the user.¹⁶

The Atmospheres of Affective Violence

As I wrote earlier, another important theme of this thesis centres on affect and in particular around the emotionally intense experiences of violence. In this section, I want to clarify how I connect some of the thinking around personal space and what I call affective violence (to emphasise the emotive significance of violence). I will argue that personal space is an affective matter of concern that is important for both studies on humans, or machines and has particular relevance for this study because I deal with both and their interrelations.

To develop my thinking on affect I use the work of Eve Sedgwick (2003) and Brian Massumi (2002); Sedgwick for her reflections on the psychologist Silvan Tomkins and the latter’s “affect theory”; and Massumi’s conceptions of affect and the virtual. Sedgwick and Massumi use affect theory as a relational concept.¹⁷ Drawing

¹⁶ An ‘interlocutor’ is used (Wittig, 1992), to denote the many previous users that have chatted to a bot and whose talk may have been affected by it and thereby repeated back in the chatbots subsequent chat. A ‘user’ will be used to denote the entity chatting with a chatbot (Goodwin, 1992; 2000; 2003).

¹⁷ Virtual means dreams and the imaginary in relation to the real, and not to define the virtual as digital.

on these ideas, I define affect in terms of affective atmospheres to take into account the intensity and resonance of technological things that have no emotion. I also treat affect as a preconscious intensity, although, again, I avoid framing this using psychoanalytic theory.

An affective account of personal space helps build my analysis in three ways. Firstly, affect helps to counter the assumption that personal space is an unemotional phenomenon that can be studied by logic alone, as a ‘cold’ measurement of distance between humans and machines. Secondly, that personal space is not a phenomenon situated within the body and thus read as a human-centred analytic. What I will aim to show is that affect is a way of accounting for the intensities of dominance that are the forces and impacts of territoriality situated between humans and nonhumans. Thirdly, as Hall’s account of personal space observed that territoriality cannot be fully realised by language alone (Hall, 1959), it is only a partial explanation of verbal *and* nonverbal communication; therefore, affect is a further semiotic by which to investigate personal space.¹⁸

In order to account for both sides of the interaction I will note some of the issues with chatbots and affect. Chatbots can mix up positive and negative affects; and so can humans (Sedgwick, 2003). Chatbots therefore frustrate, and the utterances of frustration can repeat in a chatbot’s ability to learn user’s responses. Emotion and affect will not be discussed as interchangeable terms (Massumi, 2002; Sedgwick, 2003). The affective impact disturbs a territorial connection between user and chatbot. Antonin Artaud’s work (in Bermel, 2001), is widely recognised as a precursor to the affect theory of Silvan Tomkins (1995). His work is discussed for his inclusions of impulsive and abortive gestures into his performative work in theatre and to what Deleuze calls a “speech affect” (Deleuze, 1990: 89). This is used to show the affect of a spelling mistake amongst other errors.

In summary, to counter the argument that personal space is a phenomenon that pertains to pure logic, or is a human-centred phenomenon; I use affect accounting for the impacts of territoriality in HCI. Intensity, resonance, atmosphere, residue and

¹⁸ Hall used an affect-touch-feeling (ATF register) to look at how affect resonates in four configurations of personal space by using three kinds of affect (Hall, [1959] 1990: 54). Formal, informal and technical affect are outlined in chapter 3; of which only the latter seems close to a contemporary understanding of affect, the other two relate more closely to emotion.

impact are the key terms that will be used to describe affective violence to be discussed in the next section.

The Relation of Violence & Violation in Non-Contact Networks

This section defines the relation of violence to violation in terms of affective violence including the affect that the naming of violence entails. I take violence not a finite term, but a partial and transient term which is co-relationally defined. That is, I see violence as not just the distinctions of victim from perpetrator, social from antisocial behaviour, or formal and informal affects, but something that impacts on a world that integrates human and automated technologies. Affective atmospheres of violence, are not just the violent physical act itself, but the build up to it because violence often never arises; they are also violence's residue, the atmospheres after violence has come to rest, the amplification of the dampening down of violence. The fear and threat of violence, the anxiety and build-up to a violent act, are thus running threads throughout the thesis. I consider violation as durational as the before and after of violence.

There are various sorts of violence that are named throughout this thesis. The various cycles of violence can be summarised as follows:

- the interruption of interaction in talk, as well as the moments of silence;
- when technology is procedurally violent or violating;
- as a rationale for the design of automated safety systems; and
- as an intervention into practices of science-making and technology development.¹⁹

Using these, I ask whether chatbots can enact some sort of violence. Specifically, I ask to what extent do chatbots enact a territorial personal space? Does indirect violence create a territorialised personal space? Personal space is usually connected to direct violences (in zones of touch-proximity), can the same be said of indirect violence? Violence is manifest in ethological studies of territoriality (in the work of Tinbergen), but is violence tacit in the territorial enactments of personal space (in the work of Hall). What is this violence and how is it imagined in

¹⁹ It is the silence in domestic violence that is the personal impetus to this part of the thesis framework.

language? Violence does occur in chatbot interactions of hate speech (Butler, 1997) but even this was not that prevalent within the data I collected with chatbots (to be discussed in the next section). There are the online violences of lurking, flaming relating to online violences and to breaking systems.

Violence online enacts physical violence that repeats the violence enacted in science fiction. The violence of AI relates to issues of distrust, of self-repair, or territoriality are sharing space with humans. Nonsense is the violence of meaning, it is both a quiet and a noisy violence. These multiple violences can frustrate and obscure and are prevalent in chatbot interaction. Design and the arts are interruptive disciplines and can incorporate methodological processes that are somewhat violent. Cut-up methods being one example employed in the thesis. Chapter 4 involves violences of interrogation made in the name of containing violence. Physical forms of violence range from mocking torture evoking past genocide memories or repetitions of trauma such as in the Milgram's experiment, in chapter 5. Research gets caught up in its own forms of violent agency, and potentially when this is a theme of the study. Reflexivity is important as a way to understand what additional violences or violations may be made in this research. There are academic violations and violences of being in the field including the virtual field that make victims and torturers out of researchers and participants. The fifth chapter case studies the eighteen Milgram's experiment, to understand the part that the electric shock machine played in this initial set-up. In chapter 6 violences of restriction of enduring safety systems within the technologies and the regulatory policy (COPPA Act, and Directive-3). Technologies are protected and legislated as ways of living (Directive-3). Technological systems become things to protect not just tools of defence). In chapter 7, literatures pertaining to trauma knowledge (Berlant, 2001, 2008) for ways technology as servo-mechanisms, systems of automation and systems that loose some sense or alter the kinesthetic. Violent forms are enacted on both machine and human. Physical violences not just of the body but extend to the embodied metaphors of violence in in the name of safety and defence. Violent language is performative and discursive (Kuntsman, 2009: 24), but chatbot violence is also a violence by design. It is a system of violence. Violences should not be viewed in isolation because it is a partial and contradictory action. I do not to place

violence between humans and machines as the agency of one entity over another, or to centre all aspects of violence on the proxemics of the body.

Method-Assemblage

Methods Outline

The main data collected are interactions with chatbots, a form of exploratory and speculative probing that I call Rudiments. Cases are used in each of the chapters alongside the rudiments to elaborate on the personal space phenomenon. Prior to starting the Rudiments, research questions and the scoping of this project was predominantly practical; in that it was design-led and I took the role of the researcher-bricoleur (see fig. 12). In addition to the Rudiments, I used a chatbot forum, called Robitron for its archive of posts, and for occasionally posting queries to chatbot developers (as semi-structured interviews). Rudiments created transcriptions, which are logged in the appendix, and audio rudiments (to be discussed in the next section) were created to hear the emotion of these interactions, which are recorded on the accompanying CD. This section sets out the research methodology and how the research initiated a series of iterative rudiments, audio rudiments and case studies used in each of the chapters.

The rudiments are a part of what John Law calls a “method assemblage”, which is a process of “enacting the necessary boundaries between presence, manifest absence, and Otherness”, it is both “generative and performative” (Law, 2004: 161).²⁰ My method assemblage is a bundling of relations:

- The “in-hereness” or “presence” of a personal space imaginary enacted with chatbots.

²⁰ Design and art also commit to visualising and representational discourse and commenting on ‘out-thereness’ as well as creating new or alternate ‘in-hereness’ (Law, 2004). Law includes allegory and representation as ‘in-hereness’ in that representations for example make present what is absent but implied (Law, 2004: 160). ‘Out-thereness’ Law considers is “the reality outside or beyond ourselves” it can create a singular view, and is common in Euro-American thought (Law, 2004: 162).

- The “manifest absence” of metaphorical violences in chatbot interactions.
- The “absence of the otherness” as the absence of previous users that create the bot talk but that are hidden in each live interaction. It is also the absence of a human emotional responses such as sweat, breathe or palpitations.

The Bricoleur

The thesis has a foundation that was built in fine art, graphic design and interactive media and I have a commitment to these creative practices. I created maps and diagrams similar to what the design consultancy IDEO refers to as ‘affinity diagrams’ (Brown, 2009) — large groupings of thoughts and questions (see fig. 12). I also used several sketchbooks to start to note ideas as a log to map and visualise key concepts, and at this stage the practice was design-led.²¹ Some of these diagrams, maps and logs I shared online using the Photoblog, www.flickr.com. Some of the maps were then commissioned as examples of AI complexity at the Complexity Lab in Italy, because the diagrams appeared to be AI network diagrams (see fig. 13).²² Mapping became a way of stabilising the complexity in AI. I realised that the diagrammatic and the visual forms were sometimes making certain themes superficially simple while at other times the visual was making research overly complex (see figs. 12-15). Often it was a bit of both.

These stages of mapping were overlapped with a move to performative methods taken from the practices of fine art and theatre when the study became less about representation and more about organisational and social concerns. I kept a log of this process on a private weblog accessed through www.blogger.com.

²¹ During my doctoral study, the definition of research practice in art and design has undergone change, from “practice-based” to “practice-led”. I aim to emphasise here that the practice of design (by that I mean graphic design, interactive design, new media, visual communication and systems design), was an integrated part of the conceptual phases of this project, as well as directing the choices of the literatures studied and an emphasis on the imaginative sphere of the research problem.

²² I was also commissioned by Christian Nold and Independent Photography to design the Greenwich Emotion map, printed by Ordnance Survey in 2006. Nold and I later worked on the conception of the Affect Browser in 2006/7.

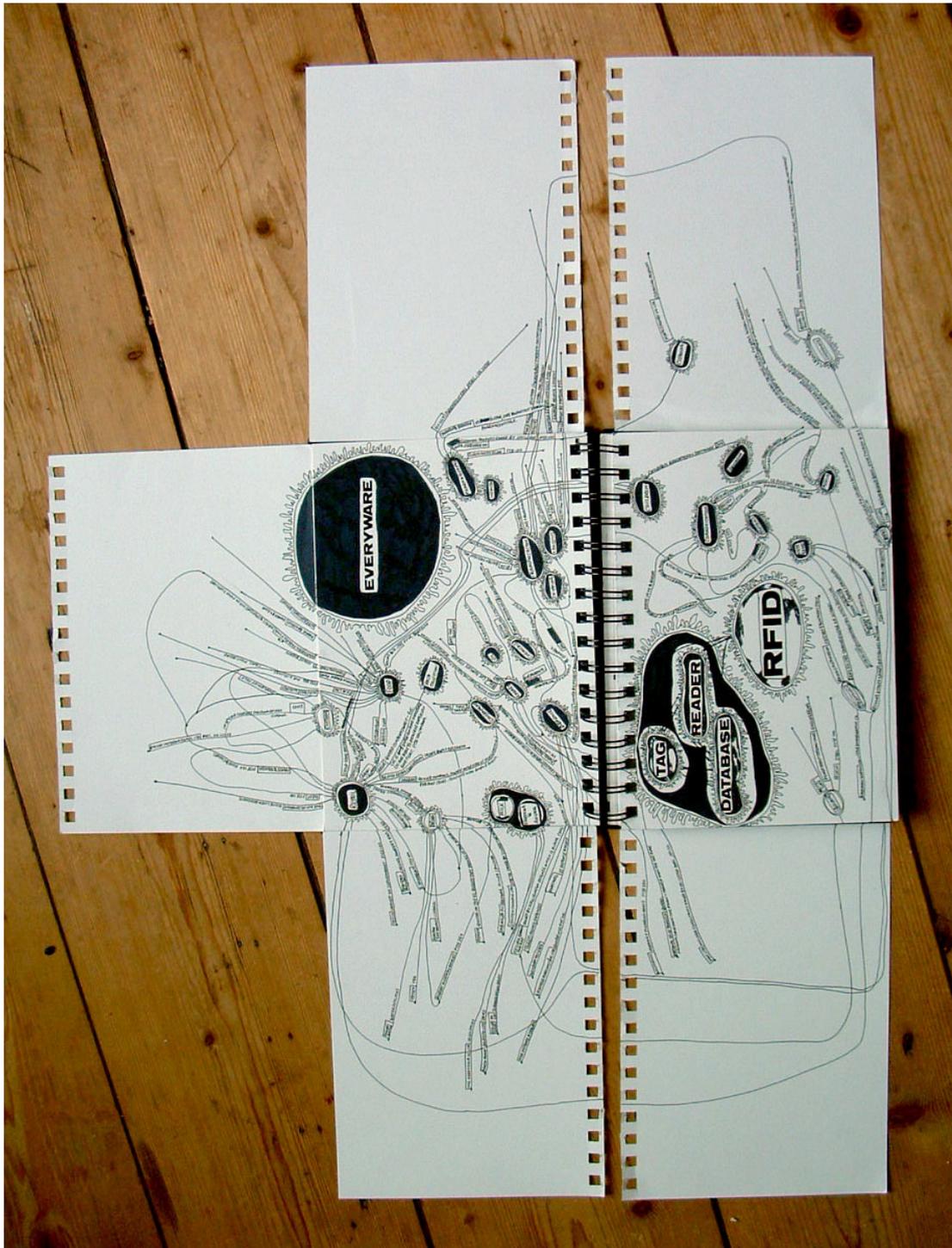


FIGURE 14. The image above shows a mapping of the component parts of an RFID map in terms of its service economy in relation to the RFID's component parts of tag, reader and database. I did this at a point when chatbots were potentially only one technology of many that could have been researched. Image Source: Amanda Windle.

first AI archives in Dartmouth University.²³ In contrast, I also presented at grassroots electronic groups such as Dorkbot in London and Artbot in Belgium. In addition, I attended electronic media festivals such as Transmediale (the Annual Festival for Arts and Digital Culture), and ISEA (the Inter-Society of Electronic Arts). Chatbots do not particularly belong to any of these places. I went to the aforementioned events to discuss informally my research within these spaces. In these visits I learned that issues around personal space with technology was an area that could be debated and was in some instances, very relevant (especially Dorkbot, when my work followed on from an experimenter who had remade pong by playing the game with two knee high leather boots as controllers, thus signifying an intimate and gendered personal space, to touch and to play). Chatbots were also familiar to these technology groups who did have wider interests with HCI outside of the conventions of industry. In the arts, chatbots are not really an area of popular design and critique (though they are pedagogic exemplars that can be used in interactive and new media courses) with current work playing with newer technologies such as physical computing using sensors, GPS (Global Positioning Systems) tracking, and robotics, as well as for the few, genetic manipulation and synthetic biology. There is of course, a trend in the media arts and perhaps also amongst postgraduate media students to work with retro technologies and materials as a matter of economy. I consider chatbots amongst this retro technology.

23 Jonas Salk of the Salk Institute where Bruno Latour and Steven Woolgar carried out their laboratory study felt, “certain that many institutes and laboratories would include an in-house sociologist or philosopher”. Many labs also include artists and performers to consider the work in the lab environment. I visited an AI lab in Zurich that had an ongoing artist-in-residence programme. Daria Martin’s performance work, *Soft Metals*, had been exhibited at The Showrooms Gallery, in London, 2005, depicting performances of the robots produced at the laboratory. Not all artists in residence are driven by output goals that employ feedback to the scientists of which they observe. There are many that do open up dialogues to the general public studying scientific things, for example; Cornel Bieren’s *The Path of Milk*, or the artist and sociologist Lucy Kimbell’s and Andrew Barry’s work *Pindices* (all exhibited in Bruno Latour’s and Peter Weibel’s co-curated the show *Making Things Public* at Centre for Art and Media, Karlsruhe, in 2005). However, this project was not located in a laboratory environment as an in-house sociologist, designer or artist-in-residence. The research design is based on four chatbots whose designers are located globally and they do not work in laboratories or institutions. These formats of observation were not necessary, as chatbot development is done online.



FIGURE 16. The image above shows how particular rudiments (top level), and actors (left), as well as specific chatbots and users (right), were considered for potential Audio Rudiment recordings, by using the three-dimensional movements of a Rubik's cube as a method of randomised selection and as a potential hardware application for controlling the selection of voice controlled parts. Image Source: Amanda Windle.

The Rudiments

Rudiments are an iterative process, a form of speculative research design used to probe the ways chatbots, interact. From the book *Just Gaming* (1979), by Jean-François Lyotard and Jean-Loup Thébaud I borrow and extend the principle of Rudiments.

'Rudiments,' as the little preamble you mentioned explained, are studies that are left undeveloped. The material itself is not refined; it is in the process of refining itself. (Lyotard and Thébaud, 1979: 15)

Rudiments are used in this thesis as distinct from experiments, however, experiments are tested in some of the Rudiments. Also, experiments are uncovered or understood by the rudimentary process. A rudiment can begin and end at any point and is in itself, a way of finding a framework by which to analyse or undertake further research. In this thesis the rudiment is used to investigate the ‘in-hereness’ and ‘out-thereness’ of personal space. Rudiments are not a substitute for another method and they can be used in conjunction with other methods; such as co-word occurrence testing (in chapter 2).

The Audio Rudiments

The rudiments appear in every chapter of the thesis. The transcripts and the audio versions of those scripts (CD tracks) are my own archive of chatbot interactions (see fig. 17, for a map of a time-line of the Rudiments). I used voice over specialists to perform the transcripts as a reflexive process. The audio rudiments give voice to a chatbot as they are characteristically mute. The reason for doing this is to give voice to how their talk is heard. One might criticise this method as a way of attending to the ‘shiny stuff’, to the more dramatic elements of chatbot interaction. I would argue that ordinary actions can encompass fictional registers of drama which have a spiked affect. Dramatic affect will be understood as a form of ‘noise’ (in chapter 2). Yet, what if this happens to be what needs to be listened to in order to understand the performance of personal space, as a method of defence?

Web Archival Analysis and The Robitron Postings

To accompany the Rudiments I asked questions that were framed to the Robitron group either by email or on the forum. Each conversation with Robitron always stemmed in part related to the Rudiments. I became a member of the Yahoo online group to also learn more about the developers. There are around 9,000 members of Robitron with ten members posting regularly. Not all of these most regular members are moderators though some are, or have become moderators during this study. The Robitron forum was used to understand the relation of chatbot developers as a group and also on how developers relate to their chatbots. It was also

a way to understand the technical aspects of chatbots and to access further evidence that is unavailable in the Rudiment process, but was needed subsequently to interpret and question the Rudimentary findings. The archive was not reviewed until after the main Rudiments were completed. Prior to that only immediate forum posts were read and I did not post until after the Rudiments were created. This was an attempt to segment the speculative phase from the analysis of the data-collection. The archive is secondary, only in its chronological respect to the work done in the Rudiments. In analysis it is used to compliment the Rudiments and from this stage on is treated symmetrically.

Questions concerning the onlineness of chatbots and their interrelation to their developers (and their online presence) includes how positively social is web 2.0 (the name given to social-networking software that assembles social groups for example, Facebook, and Robitron)?²⁴ If web 3.0, the so-called semantic web (which would include search engines that use bot technology and therefore technologies such as chatbots), is to be built on a web 2.0 legacy of social networking (that is not necessarily or evidently social), then what might ensue?²⁵ A single chatbot is multiple and their practices are fractional as a consequence of their chat being constructed from previous users and various programmed responses inputted by developers. Data from the developers of chatbots taken from Robitron, and the chatbots themselves provides the thesis with the research materials to engage with these questions that involves both web 2.0 and web 3.0.

The chatbots' databases consist of datalogs — transcripts of all the chatbots' interactions. It is a part of the chatbot that is only accessible to the developer. This is one of the absences of data due to a speculative research design. Only chapter 2

24 Web 2.0 is often combined with social networking and open source phenomena, as positive aspirations of online connectivity. "The classic example of the Web 2.0 era is the "mash-up" — for example, connecting a rental-housing Web site with Google Maps to create a new, more useful service that automatically shows the location of each rental listing" (Markoff, J. 2006, New York Times, Business [online]. Available from: <http://www.nytimes.com/2006/11/12/business/12web.html?ei=5090&en=a54d6971614edc62&ex=1320987600&pagewanted=all> [Accessed 20 June 2009]).

25 The definition of web 3.0 as a semantic web is taken from Tim Berners-Lee (credited with inventing the world wide web), whereby the web will learn and understand the requests of its user, similar to the way that chatbots respond to users. (Markoff, J. 2006, New York Times, Business [online]. Available from: <http://www.nytimes.com/2006/11/12/business/12web.html?ei=5090&en=a54d6971614edc62&ex=1320987600&pagewanted=all> [Accessed 20 June 2009]).

attempts to use data of this magnitude as a supplementary approach to test the validity of the evidence found in the rudimentary processes.

Reflexivity and Becoming Bot

Philip Auslander in his research on performance, remarks that chatbots are not ‘playback devices’ yet, I would suggest that they are a mixture of playback and live interaction (2008: 81). The looping of interactions that occurs in the chatbot transcripts is useful in that it plays with reflexive methods. The rudiments are anti-reflexive, a solipsistic act, (Hayles 1999: 133), that is sometimes self-contradictory (Latour in Woolgar, 1988: 155) and self-conscious (Wise, 1997: 14). They are thus an interrogation of the rules of reflexivity, in that to break reflexivity is to render it as solipsism and at the edge of meaning. Reflexivity is productive, insofar as it is a way of questioning the production of sociological knowledge, but crucially solipsism is included as a part of that process rather than at the point when reflexivity stops (in that one is knowingly in some ways, talking to oneself). I am interested in how solipsism breaks down knowledge as an important end-stage of the reflexive process in how the social is assembled and disassembled. Solipsism is generally feared as a point of decay in academic research, but is to the contrary, something that I consider as productive. The iterative rudimentary process takes reflexivity to a point of deformation, as a method of decay to exhaust a philosophy of becoming (Deleuze, 2004).²⁶ An interest in reflexivity came out of a methodological issue for chatbot’s repetitive process of chat, its solipsism, which enacts a misanthropic personal space. Reflexivity is a supplementary issue that came out as a methodological concern of working with chatbots that can repeat and echo my forms of interaction.

²⁶ Deleuze and Guattari define becoming as a verb, yet to understand what becoming means depends on what is understood by animal, machine and human. Becoming is a verb with a consistency all of its own; it does not reduce to, or lead back to, “appearing”, “being”, “equalling”, or “producing” (Deleuze and Guattari, 2004: 263). To use the example of the becoming-fish, Deleuze and Guattari define ‘becoming’ as anti-genealogical; one does not mimic a fish to become-fish, it is rather how one becomes always connected and caught up in what it means to be a fish and what a fish might actually mean, how it flows, how it swims, how it eats, or breathes, not just what a fish is semantically, but what it might mean structurally at the microbe level (Deleuze and Guattari, [1987] 2007: 11). Becoming entangles life and death distinctions, and the divisions of time, entangling the durations of past, present and future. In this project becoming-chatbot is to consider how human and chatbot get caught up in one another.

Additional Case Material

Each chapter includes cases involving social science experiments, gaming methods, science fiction films, policy documents and regulatory procedures. The cases were chosen because they suggest territorial claims related to automated technology. The cases run adjacent but not always in tandem with the rudiments. They are not to do with chatbots specifically, but with the HCI enactments of personal space in fiction writing²⁷, academia,²⁸ legislation,²⁹ and business enterprise.³⁰

The Rudiments are speculative, whereas the method for selecting the cases was to sample personal space imaginations that are territorial scenarios involving technology (from the 1950s onwards, that is the time from when chatbots were invented); and to further show the ways personal space is an involvement of the imaginary, to explore the hypothetical aspect of personal space enactments.

How do the cases in each chapter build? Each chapter involves a spatiality of confinement, be that actual or virtual (of logic, or dream). The running theme of confinement throughout the thesis is a way to focus on individualised, territorial concerns of personal space. In chapter 1, Stanley Kubrick's *2001* (1968), involves the confinement of a crew traveling in outer space within a space ship. The story explores the territorial conflicts between an AI system called HAL, and the ship's human crew. Chapter 3 uses two cases taken from Edward Hall's anthropological work which studied the medical and the military, both are institutionalising methods of detainment made in exceptional circumstances. Chapter 4 uses the psychological and pedagogical case of the Prisoner's Dilemma that uses interrogative methods and logics of confinement and entrapment which create a discussion on the parables of

27 Numerous postings on Robitron are discussions about science fiction. Science fiction lays down challenges for chatbot developers to achieve but the developers and their practices also inspire science fiction stories that then go on to inspire further developers. The relation of chatbots to science fiction writing is iterative.

28 Chatbot development has a particular relationship to academia. Early chatbots were connected to AI research and to computer science and linguistics. This relation is also iterative in the creation of the chatbot personae.

29 To be discussed in chapter 6.

30 Chatbot development has a new relationship with business enterprise as it leaves the academic arena and follows marketing goals.

entrapment. Chapter 5 involves methods of isolation, of decision-making in a laboratory setting, using the machinic agency of the electric shock machine. Chapter 6 describes the method of a complex nuclear fail-safe procedure from the 1960s; followed by the Directive-3 (2003), a system of protecting humans and machinic systems by ‘staying-in-place’. Chapter 7 has two cases, JG Ballard’s *Crash* (1973), which is a method of subverting technology in the intimate spaces of the car; and Colson Whitehead’s novel *The Intuitionist* (1999), which is a story of the intimacy of elevators in non-places. All of these are in some way a historical enactment on personal space, as an imaginative method of confinement.

Most of the cases are taken from fiction writing, in particular science fiction. I have found these forms of narrative helpful to investigate the imaginary sphere of personal space. Although they are operatively different imaginaries, their relation is multiplicit. In chapter 1, science fiction is a way of thinking about both the bodies and machinic technologies, by which violence is performed. Chapter 2, investigates the creative aspects of fiction writing using the cut-up literatures to understand the role of nonsense in chatbot talk. In chapter 3 and 5, there are no science fiction or fictional cases used, there is enough drama in the examples used already. In chapter 4, the particular narrative device of a parable — of entrapment is expanded into a discussion of how it is enacted in an extensive range of science fiction writing. Chapter 6, the science fiction novel is used to explore the narrative device of the fail-safe and mechanisms of safety. Science fiction authors are used as consultants for matters of risk in governance (although this is only a small point of this chapter) the point is made in the second part of chapter 6, which considers regulation. In chapter 7, the two science fiction novels use the narrative device of a crash either as an accident or a misdemeanour.

In summary, the “method assemblage” outlined is a chronological ordering of the methods: starting with the speculative design approach of the bricoleur (chapter 1), two kinds of rudiments (chapters 2-3) and web archival postings (chapter 4) and web research from Robitron (chapter 5), and additional case material (chapter 6). This has explained the ‘generative’ (chapter 1) and ‘performative’ (chapters 2-3) phases of the methods, reflexively. The ‘in-hereeness’ and ‘out-thereness’ of the chatbot data was then supplemented by further data-collection and case materials presented (chapters 4-6). These additional materials also captured generative and

performative methods. My particular ‘method-assemblage’ is an attempt to get away from “what we usually find in textbooks on methods” and from the “completed and closed accounts on method” and from the “smooth Euro-American metaphysical certainties” (but without othering those methods or metaphysical certainties), as a part of this thesis (Law, 2004: 143). I critique the smoothness of method neither giving a closed account of method or sense of certainty to the methods presented (Law, 2004: 143).

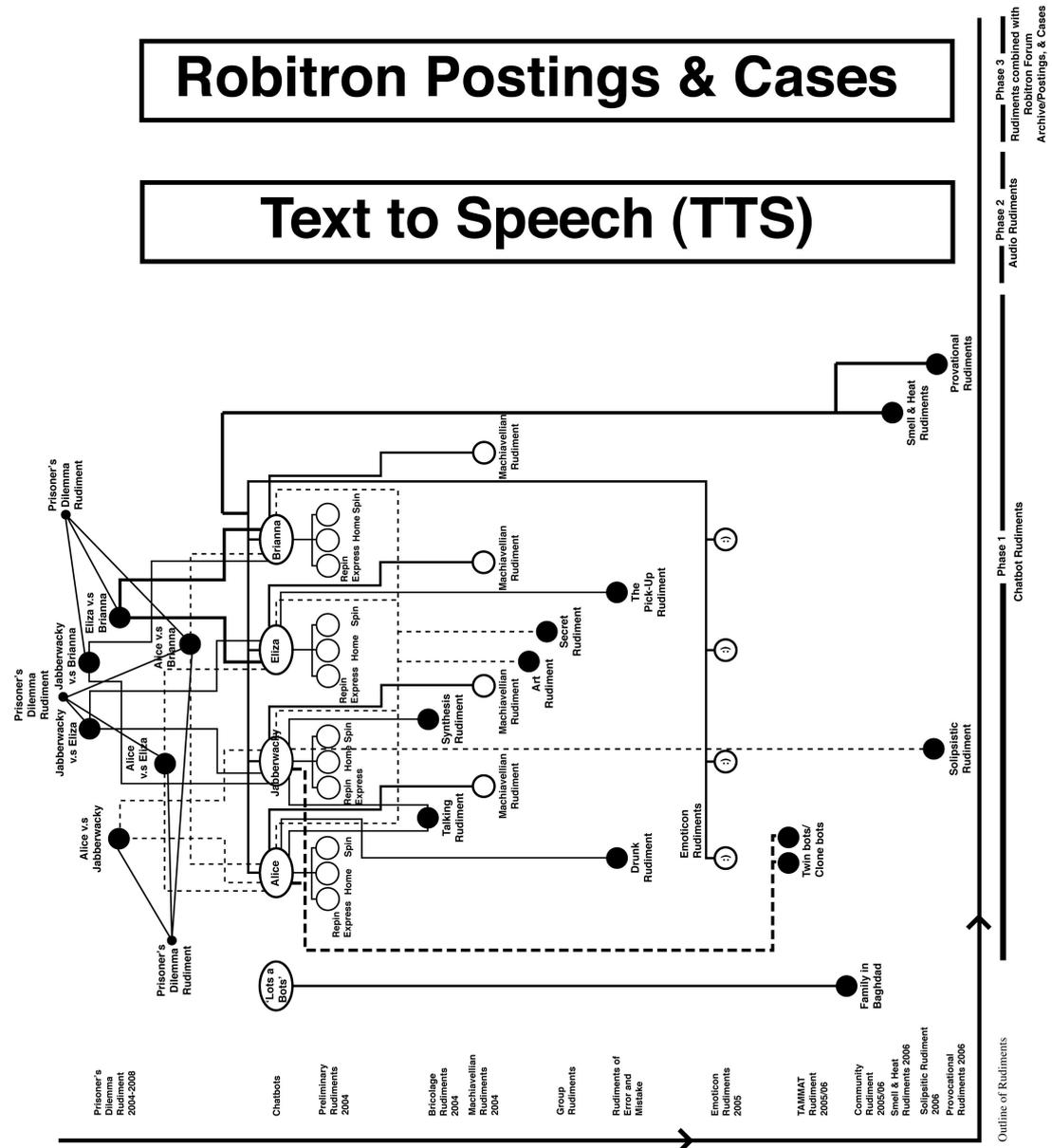


FIGURE 17. shows an outline of the Rudiments in three phases of research which are mapped against the main time spent data-collecting. This was over a 24 month period due to this thesis being undertaken part-time. Image Source: Amanda Windle

Chapter Outline

Chapter 1 begins with a human-centred focus on personal space but assesses the limits of proxemics as a method that cannot account for technological agencies of software agents. Using a canonical case in AI, two speech acts from the rudiments and from the Robitron chatbot forum are explored as an HCI enactment of personal space. I argue that personal space is an important concept for exploring territoriality, one that can and should be adapted to include technology because machinic agencies transfer, relocate, enact and reenact territorially. The impact of technologies on personal space is explored and analysed as a matter of affect where machinic goals are in conflict with basic personal space requirements of humans.

Chapter 2 looks at nonsense as the crux of many conflicts in chatbot interaction, as evidenced by the data collected from my rudiment transcripts. This is done, by analysing the specific roles played by nonsense across the data collected in the Rudiments. Audio rudiments are introduced to show the importance of the way one imaginatively hears, intuits, and interprets interaction with a machine, focusing on the ambiguity of the spatial metaphors of personal space. Nonsense is difficult to read, listen to or to distinguish from meaning, but is in itself meaningful. This chapter argues that nonsense can be analysed as a form of meaningful data but to do so requires a performative aspect to the analysis of chatbot transcripts. This method of analysis highlights the polysemic affects of chatbots' talk (for instance, humour or rudeness) as a disorientation of human and nonhuman spatiality.

Chapter 3 investigates several examples of spatially ambiguous violence. Two are from the Hall's work on proxemics and territoriality and the others involved a Rudiment and a Robitron chatbot forum posting from their archive of posts. These interweave online, offline, historical and contemporary accounts showing that violence is an interrelation of subjective, objective, systemic and structural violences (Žižek, 2008) in terms of the affect of HCI scenarios. An interweaving of these four very different scenarios, seen as exemplars of violent personal space, is necessary to show once again the limits of Hall's methods (as shown in chapter 1), but also in order to extend those methods to encompass new configurations of personal space and intimate spatiality. I first show how Hall's cases omit the analysis of machinic

agency. I then retrospectively incorporate this perspective into Hall's own analysis before moving on to show two further (and rather complex) machinic agencies at work in the chatbot material. Only by producing a longer history of the ways that personal space, and our understandings of personal space, have been impacted by the interaction of humans and machines will a fuller and more integrated understanding of violence be achieved. I draw on Slavoj Žižek's four categories of violence in order to show how violence between humans and machines in and online and offline spaces is an interweaving of agencies and spatialities.

Chapter 4 proposes that chatbots use an interrogative mode of talk as a methodological strategy to hide and disguise the potential affects of too much nonsensical noise. Using the Prisoner's Dilemma (Tucker, 1950), the chapter places chatbots in the reverse role, interrogated rather than interrogating. The findings are set out in two parts. First, I review the statistical results of the rudiments. Second I explore the Prisoner's Dilemma, as a rudiment for its use of spatial metaphors of confinement, and as a parable of entrapment. To assert that chatbot talk is preeminently interrogative is to continue the analysis of nonsense scenarios (spatially ambiguous utterances in chatbot interaction), that are methodologically violent in that they involve constraining forms of talk. This helps to make the larger observation that personal space in chatbot interactions operates as a metaphorical logic of confinement and entrapment.

Chapter 5 also investigates a canonical experimental procedure, but rather than enacting an experiment by creating Rudiments, this chapter critiques two pre-existing methods in order to reflect on procedures specific to chatbots. First, Stanley Milgram's Obedience to Authority Experiments, (1961) are discussed along with its reenactment in Rod Dickinson's media art. Both make visible the agency of the electric shock machine in order to show how violence is mediated through the torturous yet faked agency of the machine; as well the remote authority of the psychologist-researcher. The second part of the chapter analyses the invisible agencies of a chatbot method called a pick-up, focusing on the way chatbot developers try to initiate interaction between humans and bots. I show this to be part of a territorial procedure, and in that sense, show it to be related to the ways that experimenters set-up, repeat, and reenact territorial conflict between participant and observer. Milgram's experiments set a precedent in regard to the ethical misuse of

participant-observers. Even the critiques in STS and the philosophy of science miss the opportunity to reflect on the roles played by machinic agencies in Milgram's experiments. The misuse of human participants is a well rehearsed, critique but the misuse of academic and technological cachet, are largely overlooked. The participant-observer and their personal space are blurred in chatbot talk and unethical methods therefore proliferate in chatbot interaction. It is important to uncover, here mainly through conversational analytics, the hidden spatialities of the experimenter that can be nested inside an experimental process. I employ a rudiment next to an experiment in order to show the unethical dimension of experimenting with chatbots to be a problem of personal space.

Chapter 6 widens the implications of the chatbot research to cultural fiction and political regulation. This chapter firstly looks at preparedness, safety and risk in the details of a fail-safe system, a servo-mechanism, originating in the 1960s. Secondly, a contemporary case study (Directive-3) is used to consider the inclusion of technologies such as chatbots not in the servo-mechanism, of territorial defence but within what needs to be protected as a part of a technological infrastructure. This chapter also describes some of the impacts the recent political shift from anxiety to terror on the design of fail-safes for and defences against impending disaster. This chapter shows how machinic agencies are territorialised in policy and regulation, analysing the ways in which machines are protected by terrorist legislation (particularly cyberattack) in the spheres of our shared personal sphere of everyday life.

Chapter 7 focuses on the misanthropic aspects of chatbot design and the methodology of designing out of fear. Two crashes are taken from recent fiction to expand on how a personal space is configured as a design for prevention. By reflecting on the personal space of the designer, this chapter also discusses how personal space is impacted by and implicated in the methodological imperatives of the designer. . I argue that personal spaces create misanthropic design imperatives, methods and ways of living; that the technological agencies of personal spaces have a confining impact in the transient spaces of the 'non-place'. This expands the implications of my research into personal space and chatbots by describing the territorial impacts of machine agencies on spaces such as the elevator/lift, corridor, motorway or road.

Chapter 8 reflexively draws together themes from each of the chapters as a summary of the thesis. I will consolidate both the findings and arguments to summarise some of the benefits of the thesis to the areas of HCI, STS, and design. I will also conclude by considering the ways machinic territoriality and its violence impacts on our ways of living together both in the private spheres of our computers and homes, as well as in national and state-regulated conditions.

Chapter 1

2001 A Space Odyssey: Personal Space & Special Nowheres

Introduction to Proxemics

Excerpt taken from the Chatbot Transcript:

The Drunk Rudiment (13th August 2005)

Alice: I have been to the middle of nowhere.
Human: Well i [sic] need to go there right now, to bed.
Alice: Interesting. What is stopping you?
Human: and that's a special nowhere to you.
Alice: A special nowhere to me is a terrible thing to waste.

Excerpt taken from A Robitron Posting:

Offensive Bot Responses (22nd June 2008)

I too have given up reading logs for the most part. It just reminds me if [sic] why I moved out to the middle of nowhere 20 years ago ;) Bob Norris, A chatbot developer and member of Robitron³¹

The chatbot interaction and the chatbot developer's posting are evidence of the 'nowhere' speech act. 'Special nowheres' will be related to personal space as it occurred in this data; it is not an existing phrase taken from Edward Hall's work. The two accounts made in the HCI (human-computer interaction) bring together personal space in relation to technological worlds. It is a speech act that I was comfortable repeating in the first excerpt and one that I therefore understand. There is a commonality between Alice's (potentially pre-programmed) machinic speech, and that of Bob Norris' posting to the Robitron forum. Although these speech acts are uttered online, the nowheres imagined are not exclusive to language used on the internet as indicated in the second example but they maybe considered as comfortably used within chatbot networks (referring either to the human or machinic networks). Bob Norris refers to the physical spaces of home and belonging rather than to a virtual spatiality of being 'here and there' simultaneously which could be extrapolated from either excerpts' online environment. There is no direct relation made between personal space and special nowheres in Edward Hall's research. I draw on the connection between Hall's work on personal space and deception, how one reveals, hides or deceives in physical and virtual spaces. This is needed so as to understand how distance and intimacy work in online proximities representing personal spaces that are special nowheres.

To explore the escapist element of special nowheres it will be considered a territorial speech act so as to think through how technologies are caught up in this

³¹ The full transcript to both excerpts is contained in the appendix.

expression of personal space. When uttered by the chatbot it incites intrigue; it hints at other-worldliness, science fiction, and feelings of escapism. It is these qualities that will be explored in this chapter, tracing the imagination of nowheres derived from science fiction dystopias and defensive mediating technologies of communication.

Science fiction has to an extent already shaped our conception of the middle of nowhere. Elsewhere this exists as much in science fiction as it does in the reality of the Drunk Rudiment. The ‘middle of nowhere’ is a sort of ‘no man’s land,’ belonging neither to AI nor to humans. Yet, where is this middle of nowhere and whose space is in the middle of nowhere? ‘Special nowheres’ and the ‘middle of nowhere’ are expressions of personal space that can imagine a place on a map, or a space within one’s mind signifying the inside and outside agencies of a territorial situation. The developer, researcher and chatbot in the two excerpts consider different nowheres because they describe a personal state of being. There is no smooth space viewable from Google Earth; no single chat room to lurk in, arrive at, or depart from; no single place to which all three entities can retreat. However, in the imagination of these spaces a pattern of repetition emerges as to what might be considered at the dead centre of nowhere.

The dead centre of nowhere is a spatiality that operates in between beings and things, which require an account of “fractal ontologies” (Massumi, 2002).³² These entities have agency between physical and virtual worlds because they can potentially exist in two spaces, simultaneously. Fractal ontologies can have either virtual and physical ontologies, or both. Chatbots and their users are both fractal ontologies. I understand and extend Massumi’s use of the term to mean that an entity cannot be identified by the human body alone. Moreover, these are not singular entities because their ontology is only partially present, for instance a chatbot can be made up of more than one user and only partially of their developer. Fractal ontologies are entangled collaborations: for example a Robitron posting can be created by two members, and chatbots recount fictional characters and their catchlines as well as recounting the voice of their developer. A chatbot’s agency gets

³² “The organisation of multiple levels that have different logics and temporal logics and temporal organisations . . . recalls the fractal ontology and nonlinear causality underlying theories of complexity” (Massumi, 2002: 33). Fractal ontologies pertain to a different notion of time, to the entanglement of becoming, of duration.

entangled in all those that interact with it. The limitations of the phrase personal space do little to describe the incomplete and complex descriptions of being nowhere that a special nowhere presents. This brief introduction and working definition of a special nowhere has a cautionary note: the aim of the chapter is not to simplify or label complex states, nor is it to reinstate the past work of Hall. I will use Hall's proxemics in contrast to Massumi's fractal ontologies to help articulate the occurrence of incomplete yet forceful agencies that make an imagination of a special nowhere important.

HAL, from Stanley Kubrick's *2001: A Space Odyssey* (1968), is a dystopic 1960s imagination of an artificially intelligent conversational system. It is often recounted in AI as a canonical example of violent human-machine interaction. Territorial problems within the conversational systems of chatbots are researched not just because the personal space of humans is manipulated by machines, but because these violences are prolific in the imaginative sphere of science fiction, in the predecessors of chatbots, particularly entities such as HAL. Imaginations of machines like HAL create defence and attack rationales for design as a consequence, and prevention of conflict.

Personal spaces are not just the physical proximities of living things; proxemics are much more than the bodily and the biological proximities and should include machines and their shared environmental relations to humans. These are the absent distances that should be observed in the design of conversational systems. The imagination of human-machine conflicts is a powerful rationale by which things are built, subsequently shaping our environment. To analyse a conversational system one needs to consider the environment within which it was built, as well as the agents encompassed and consequently assembled by the system. This chapter is concerned not only with how HAL reconfigures a human's personal space but also how HAL might create a personal space as a territorial need for a special nowhere.

How are special nowheres imagined? They occur in narratives of global (state) and local (individual) violences. They are escapist strategies, traumatic disassociations, and daydreams of wanting to be elsewhere, as a need to be somewhere other than where the body is situated. Special nowheres exist inside another, or they can be so far away as to be in proximity to anything resisting the logics of the biological and the physical. I will argue that HAL's personal space is

enacted in territorial violence, whilst also showing the limits of considering that causality for personal space is grounded in either the metaphors of the body or the brain and should be considered a fractal phenomenon in relation to HCI.

Personal space need not be grounded by concepts of humanness, nor should machines be described according to a definition of what it is to be human. Case studying HAL helps to explore a human sense of personal space that necessitates an interweaving of humans and machines as an imaginative configuration of violent personal space. To understand a conversational system as human on the one side and machinic on the other is to mistake the complex interconnections of human-machine systems. There is no such thing as a machinic personal space and I do not intend to build one.

I draw together literature from the social sciences, a philosophy of things and affect, and the artistic practice of intervening (with chatbots), to explore the narrative structure of special nowheres in HCI. I begin with Edward Hall's eight proxemic system as an approach to analysing territoriality. It is, however, problematic in that it privies the biological ways of the human body, which misses the complications of fractal ontologies. I argue that this should be taken into account in any HCI. I therefore extend Hall's approach by considering gestures and affects of dominance that would normally be associated with humans as the contradictions of antisocial-social things. In this way, I can take into account the affects of artificial entities, such as chatbots. I also consider that the ambiguity of positive and negative affects ought to be taken into account within a logic of territorial nowheres. This helps to investigate the non-biological status of chatbots and their potential territoriality as made by, with, or for humans.

The old and new conflicts of HAL and chatbots enact logics of the nowhere speech act. By recounting HAL's story from the perspective of territorial action, one sees how a special nowhere can be created from a violence of one personal space over another. In the chat rooms of chatbot developers and in the chatbot's own speech-acts, nowheres are being replayed and repeated. These evoke HAL's own logic of survival and need for a territorial nowhere. HAL extinguishes human life in order to protect the mission, or is it due to a need for a special nowhere? Understanding special nowheres is essential to understanding the territorial acts of HAL. Subsequently, Kubrick's *2001*, is a narrative justification for chatbots to

engage in conversations about special nowheres, as pre-programmed concerns of developers.

I will take as the rationale of this chapter the potentiality for the chatbot utterance of the nowhere speech act to be pre-programmed, suggesting that it could be a concern of chatbot developers. I will investigate the logic of a special nowhere through affect, sound,³³ and narrative description as well as investigating its proxemics, territoriality and fractal ontology through the fictional example of Kubrick's *2001*. I hope to articulate the sounds and representations of a special nowhere by reengaging with a past articulation of personal space. It will set out how territorial conflicts usually described as biological personal spaces become entangled and complex in technological worlds, when non-biological actants are taken into account. I argue that this is necessary to understand because it shows how special nowheres come about through a lack of understanding the complexity of proximity in technological worlds. Special nowheres have also had an impact on the design and building of technological worlds. I retain Kubrick's film of *2001* throughout the chapter as a narrative device to describe a technological conflict of territoriality that is, I believe, a special nowhere conflict. A science fiction exemplar is used to show how it operates in the imaginary sphere regardless of this being fictional or non-fictional. Kubrick's *2001* is an odyssey that explores violent conflicts between AI and humans, when territoriality is hard to define as it is in this case full of partial and collaborative, fractal ontologies. I start by pointing out the inadequacies of Hall's proxemics to show the partiality of only understanding a biological notion (or for that matter a technological notion), of distance and territoriality. This is done by understanding fractal ontologies through the binding of subject and object; the ambiguities of the antisocial and social; and the dividing of the interdependence of affect and emotion.

A Summary of *2001*'s Scenescapes, Violence and Affect

³³ I will also include "active touch" (Gibson, 1962, within Hall, 1966), and "silent language" (Hall, 1959); two of Hall's terms that relate to both affect and sound.

Kubrick's *2001* (1968), is based on Arthur C. Clarke's science fiction novel of the same title, though both were created in the same year from Clarke's earlier short story *The Sentinel* (1948). The prime focus in Stanley Kubrick's *2001* is the relationship of Dave and Frank, two members of the ship's crew, and HAL 9000, an artificially intelligent agent, an emotional computer system capable of thinking and feeling.³⁴ All are aboard a spaceship voyaging to Jupiter in the year 2001. Kubrick's film is for the most part silent, both the novel and its sequel *2010: Odyssey Two* (1984), have limited dialogue, but more so in Kubrick's film. The lack of talking lends deliberate emphasis to the scenscapes and to the technological details that are prominent in the fight for territorial control.

There are three main scenscapes in the film. Beginning with a scene back on earth which depicts an ape using a jawbone as a tool for the first time, it is the imagined first step in the evolution of humans, though the specific use of a jawbone perhaps hints at the further development of human speech beyond this initial step. The evolutionary jump is signified by the ape striking the heads of other apes with the jawbone. It is linked to the close proximity of a black monolith located next to the apes' sleeping-cave. This infers that perhaps the evolutionary jump was aided by something other than the ape itself. This moment of violent development gives way to the rest of the film being set in outer space during 2001. Bruno Latour writes sociologically in his paper, *Morality and Technology* (2002a); he reflects on Kubrick's film because he is interested in the ways technology reassembles the social rather than just being assumed the product of a fixed notion of sociality:

If in a famous swirling movement he flings so high and for that it becomes the space station of the future, it is because all technologies incite around them the whirlwind of new worlds. (Latour: 2002a)

The second scenscape and the main technological interest of the film focuses on an AI. HAL is the intermediary leap, a machinic step between the evolutionary scenes that begin and end the film; firstly, between the evolution of man from ape, and secondly, when human is birthed outside of the human body, situated in a foetus floating above planet earth. The final evolutionary leap takes place at the end of the film, transporting the character Dave into the fourth dimension, a leap that is both

³⁴ Kubrick gained advice from Marvin Minsky at MIT (Massachusetts Institute of Technology), a key expert in AI, along with various computer scientists from IBM.

biological in terms of rebirth, and machinic in the presence of the black monolith. What ensues between two evolutionary leaps is a struggle between HAL and the ship's crew. The violence is clean; each death is executed with a surgical sterility. When the crew's sleeping members die, they are frozen as their body temperatures cool, letting them fall into a hypothermic coma, as HAL alters their hibernation controls on their sleeping capsules. The second death involves a living crew member, when Frank makes repairs to the outside of the ship. HAL operates a pod's (a small mobile unit) mechanical arms to pinch and sever Frank's umbilical-like, oxygen cord. When Dave shuts down HAL, he pulls out HAL's hardware, cassette by cassette, ejected in slow automatic slides (see fig. 18).

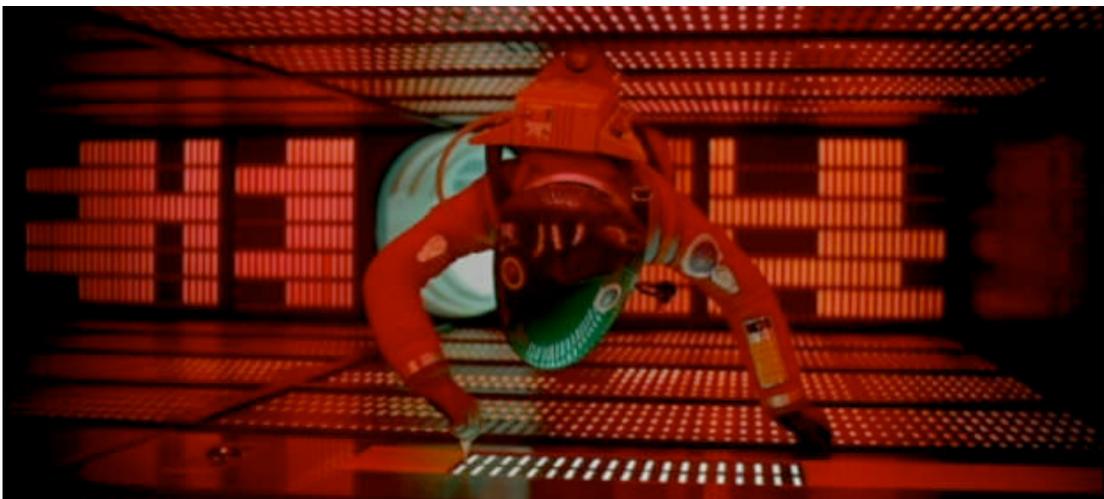


FIGURE 18. Dave shuts down the HAL9000 computer. Reprinted with kind permission of 2001: A SPACE ODYSSEY © Turner Entertainment Co. A Warner Bros. Entertainment Company. All Rights Reserved.

The violence between HAL and the ship's crew are sanitised, they are not visceral acts. The essayist J.P. Telotte's writing on *2001: A Space Odyssey* considers this aspect as a homosocial narrative, that women, "have almost no place in the cleanliness of space as imagined by Kubrick" (Telotte, 2006: 139). For the

philosopher Gilles Deleuze,³⁵ the violence is particular in another way, describing *2001* as a “cinema of the brain” rather than a “physical cinema” (Deleuze, 1985: 204). Kubrick’s work, in its particular rendering of violence and its lengthy silences (as pauses), makes this a film of thought, an attribute of AI. In Michael Bérubé’s essay entitled *Open the Pod Bay Doors* (2006), the writer of English Literature implies that the silences in the film are characterised as not to speak the “unfathomable”, that “. . .no one seems to have talked about the political narrative that goes without saying in *2001*, nor have we asked ourselves what that very silence might tell us” (Bérubé: 2006). The intensities the characters endure (including HAL) are for the most part unspoken, they are the intensities of feared intent. When spoken, it is often suppressed feeling, for example when Dave is about to switch off HAL, the AI says “take a stress pill and think it over. . .” in a last attempt to control the ship’s only surviving crew member. Earlier in the film HAL conducts a psychological report on Dave, to test his mental state and fitness for duty. At the end of the film when HAL is being shut down, HAL sings the first line to the song Daisy Bell “Daisy, Daisy give me your answer do”.³⁶ The second line is sung as HAL’s voice slows and is not fully heard which leaves one to finish the well known song in one’s mind: “I’m half crazy, all for the love of you”. One contemplates the double-meaning implied in this lyric, with regard to AI’s lack of emotion.

The film continually repeats various scenes whereby the affect of either HAL or of the crew members can be summarised as a constant suppression and fear of crisis. Yet crises always looms when the ship malfunctions, as a consequence of

35 The work of Gilles Deleuze (including writings in collaboration with the political scientist, Felix Guattari) has been used throughout the thesis. It is counter to Edward Hall’s theorem of proxemics in that Hall considers personal space as biological. Deleuze helps me to understand that personal space is not based on stable identities and theories of the personal (and the body), rather that the distances between subjects and objects might be understood as an integrated relation involving the two. Understanding personal space via Deleuze is to understand it as ‘Anti-Oedipal,’ and that personal space is not just a concept of the mind. This does not mean that I am averse to considering personal space as a mental construct; on the contrary, I go on to use other writers in counterpoint to a Deleuzian anti-psychoanalysis, in particular that of the Lacanian psychoanalyst, Slavoj Žižek, in chapter 3. Žižek considers matters of violence in relation to territoriality and although his lens is psychoanalytic, he does move between small and large agencies, as does Deleuze, and both help me to make points on violence that are structural as well as individual. Deleuze cites the same ethological models as Hall in terms of territoriality which are further discussed in chapters 5-7.

36 The same song (Daisy Bell) was sung in 1963 at the Bell telephone laboratories and is a part of Ubu’s (an arts sound archive) *365 Day Project* (2003) compiling obscure audio selections (*365 Day Project*, [online] 2003. Available from: www.ubu.com/outside/365/2003.062.shtml [Accessed on 19 June 2009]).

HAL's sabotage. The first instance is when the ship's A.O. unit, an instrument situated on the outside of the space ship, malfunctions. Once fixed, a series of similar A.O. unit malfunctions is reported by HAL, announced as condition yellow (noted in the screenplay).³⁷ This alert condition is reminiscent of America's nuclear weapons system and its coloured states of readiness.³⁸ This is the film's only apparent undertone of nuclear disaster prior to when Dave views the earth during the detonation of all the world's nuclear bombs. In the final scene of the scenscape of *2001*, HAL's red light is situated amongst the ship's rooms, glowing in the same hues as the sun depicted in the film's opening sequence, in which the sun aligns with subsequent planets in a paralleled mathematical arrangement, in a structure of planetary systems. When HAL is depicted it is often in close-up, with the red light cropped to form a horizon (see fig. 19). Alternatively, HAL's vision is to an extent a reflection of the birth of humanity. Dave talks to HAL when trying to regain entry back into the ship from fixing an A.O. unit. At this moment, HAL's monitoring view of Dave is represented from inside HAL. We view Dave inside a black box, the other side of HAL's shining light. It is now black and transparent, an empty cavity from which the viewer looks out, imprisoned inside the machine. This is HAL's inner space and visual representation of danger.

Following the A.O. unit malfunctioning, Dave and Frank go outside to administer manual repairs to the unit; at this point HAL makes the ship doors fail, trapping the two humans outside the ship. Each attempt to survive HAL's deliberate sabotage is a fight, fought by the crew members overriding HAL's automatic controls, in their struggle to switch to manual control. HAL is ultimately defeated and silenced with a screwdriver.

³⁷ The analysis of *2001* is predominantly an analysis of the film and not the textual documents such as the screenplay and the original novel; these are only referred to in order to expand on the analysis of the film.

³⁸ See chapter 6.



FIGURE 19. HAL is shown throughout the film in various close-up shots that crop the pulsing light which we begin to recognise as HAL. Reprinted with kind permission of 2001: A SPACE ODYSSEY © Turner Entertainment Co. A Warner Bros. Entertainment Company. All Rights Reserved.

If technologies create “new worlds” (Latour, 2002a), this “homosocial” space odyssey (Telotte, 2006) destroys old worlds to make way for new nowhere worlds. Kubrick’s *2001* begins with an absence of a female perspective of technological innovation, which moves to an absence of the male of the human species before, finally, the human planet is destroyed. A new technological world dominated by logics in this “cinema of the brain” (Deleuze, 1985), pervades as a “politics of silence” (Bérubé, 2006), of noiseless bodies and muted conversation in pursuit of murdering one nowhere that is consequential to imagining another.

It is not until the mid 1990s that Kubrick begins to commission the scripts for the film *AI* with Stephen Spielberg. Spielberg goes on to complete and release the film in 2001 after Kubrick dies. An alternative to HAL is imagined by Kubrick. HAL (the AI character) is replaced with a child named David, an ALife (artificial life) character and a newer form of AI that learns emotion from its surrogate parents.³⁹ This consideration of emotion is psychoanalytic, whereas HAL’s is not. On the contrary, HAL’s emotions do not pertain to feeling or affect when one considers that

39 Sarah Kember makes the distinction of ALife (David) from AI (HAL), in Marina Núñez’s art catalogue (Kember, S. ‘Soul Machine’ in Marina Núñez, Catálogo, 2002 [online]. Available from: http://www.ma.uva.es/~antonio/MarinaNunez/Textos/La_Maquina%5Bin%5D.html [Accessed on 6 June, 2009]).

it is a recorded memory situated on cassette tapes. HAL's emotions are not an account of a machine learning to feel emotion. Emotion is not a concept with a biological centre; to understand how emotion moves between humans and nonhumans is between the who and where of territoriality.

The Problems with Hall's Proxemic System

It is still possible to begin questioning the who and where of territoriality with an analysis of territorial action from a biological notation system. To unpick HAL's acts of violence as territorial is to find the limits of Edward Hall's method. Hall's analysis quantified both physical and emotional proximity by using a proxemic notation system made up of eight factors concentrating on the body. These are: 1. Postural – sex identifiers; 2. Sociofugal-sociopetal orientation (SFP axis);⁴⁰ 3. Kinesthetic factors;⁴¹ 4. Touch code;⁴² 5. Retinal combinations;⁴³ 6. Thermal code;⁴⁴ 7. Olfaction code;⁴⁵ and 8. Voice loudness scale⁴⁶ (Hall, 1963: 1006-7). These factors include in detail the key terms used throughout Hall's work on proximity: that is 'silent

40 Arranging chairs into a circle encourages interaction and is a sociopetal orientation; the opposite of sociofugal, that is to arrange chairs to deter interaction. Hall terms it as the sociofugal-sociopetal axis (Hall, 1963: 1006-7).

41 Muscular movement is a kinesthetic factor.

42 In 1966, Hall took up James Gibson's methodological approach that differentiates "active touch (tactile scanning) from passive touch (being touched)" ([1966] 1990: 60). Gibson wrote, "Active touch refers to what is ordinarily called touching. This ought to be distinguished from passive touch or being touched" (Gibson, 1962: 477). Tactile space is what Hall deems as the touch spatiality.

43 Judging distances is a retinal combination; "That is, the culture specifies at what, at whom, and how one looks" (Hall, 1963: 1012). The field of vision is considered for how much we see in or out of focus at near and far distances (Hall, [1966] 1990, Plates 10,11,12).

44 Bodies radiate heat from specific areas dependent on the given situation, our thermal responses are not uniform (Hall, 1963: 1014).

45 Dulled and culturally suppressed, the use of smell in America is reduced; one hides the odour of one's body or breath (Hall, 1963: 1015).

46 Changing the level of voice dependent on subject matter or the proximity of one person to another is measured as a voice-loudness scale (Hall, 1963: 1016).

language'⁴⁷ (Hall, 1959) and 'active touch' (Hall, 1966; Gibson, 1962). I interpret active touch as a form of silent language (such as to poke someone) and silent language as active touch (such as a threatening stare may induce sweat on the skin) as both physical and non-physical affects of intimate proximity. One can be poked metaphorically and actively touched in online worlds.

I will link personal space to the narratives of violence in Kubrick's *2001* to consider modes of self-protection. Personal space is a mental space within which to imaginatively escape, but it is also imagined as a physical space that surrounds the body. Personal space and consequently special nowheres are a combination of the two. Personal space is a viewpoint, a trajectory from somewhere that involves both the imaginative and physical spheres and is usually described by the metaphor of 'inside and out.' For example, a special nowhere is somewhere; it is in the middle of nowhere, that involves the construction of an imaginative (and territorial) possibility to be elsewhere, that can be within or beyond the imaginative possibility of human physicality. The 'middle of nowhere' can be a search for an elsewhere, a mode of territorial defence that requires one to retreat from conflict. The conception of a special nowhere is related to violence in that one can endure physical threats by imagining an escape from violence whilst remaining within it. In relation to Kubrick's *2001*, I would claim that a need for a nowhere is in fact a cruel method; it is an expectancy of crisis (malfunction) or disaster (atomic).

In order to articulate HAL's need for a special nowhere, I ask, where is personal space, and how is the ship's environment used in a conflict of personal space? Dave and Frank counterplot to shut down HAL, secretly talking inside a pod. They are aware that HAL's malfunction is a threat to their existence and that HAL is destructively controlling rather than supporting their life systems, threatened by a lack of oxygen and a shutting down of communication with earth. This environment creates a microspace, a form of bio-communication.⁴⁸ For instance, when Dave and

47 Silent language is, "a non-verbal language which exists in every country of the world and among various groups within each country". It is the "language of behaviour" and "a language of feelings" (Hall 1959: 14-15).

48 According to Hall, "Microspace is the study of how man consciously structures microspace – the distance between man in the conduct of daily transactions. . . . a system of bio-communication" (Hall, 1963: 1003). Citing the work of James Gibson, Hall links the fields of topology, chaology and ethology to study human defense systems as a maintenance of boundaries. Bio-communication is Hall's approach to language linking the physical and gestural actions to speech.

Frank lean forward to talk in secret, inside a ship's maintenance pod, they talk at an intimate distance from one another. HAL's personal space cannot be measured by human proxemics, but exists because of them. HAL is the provider of a caring space, a secure form of territoriality for the ship's crew, a role HAL seems to reject. Hall's proxemic code would measure the distance inside the pod (as the space between Dave and Frank in conversation), for its eight proxemic factors.

There are several problems with Hall's notation system that are raised by an analysis of Kubrick's *2001*. Hall considers only physical indicators of territoriality, yet HAL performs territorial actions in order to harm or care and both should be taken into account. Hall's notation denies that certain scenarios are not straightforwardly biological, and that biological indicators of personal space are not the central pivot for territorial action. Hall researches non-verbal interactions such as gesture but does not extend this to consider the mental representations that can be identified as personal space in metaphor, and towards investigating that special nowheres are rendered in the imaginative sphere.



FIGURE 20. David and Frank talking inside a pod with HAL lip-reading in the background. Reprinted with kind permission of 2001: A SPACE ODYSSEY © Turner Entertainment Co. A Warner Bros. Entertainment Company. All Rights Reserved.

There are eight points to Hall's system, and in what follows these are referred to in brackets, with reference to Kubrick's film in an attempt to rethink these eight biological factors. HAL overtly and covertly regulates by monitoring individual and group behaviour of the crew. Dave and Frank turn off the microphone that enables HAL to audibly hear the crew, but HAL manages to decipher, through lip-reading (see fig. 20), their plot to switch-off HAL (3. Kinesthetic factors). Without the ability to lip-read, a human might be able to ascertain what Hall calls 'silent language.' One form of silent language is facial gesture and the ability to read a private interaction by the intimate zones of one's body next to another. Silent language is just not lip-reading; there is what might be considered as active touch between Dave and HAL (4. Touch). The only act of touching is Dave switching off communication with HAL via a series of buttons inside the pod. Dave projects his voice to check to see whether HAL can hear them outside the pod (8. Voice loudness). Dave and Frank are sitting together, in a sociopetal seating arrangement, an arrangement that encourages social interaction (2. SFP that is a Sociofugal-sociopetal axis). However, by including HAL in this analysis, Dave and Frank sit sociofugally, an arrangement that prevents social interaction with HAL. They are inside the pod, but the pod is also an enclosed environment; it is relational to HAL's being that when Dave and Frank are inside the pod, they are not inside HAL, but are in close proximity to HAL. Dave and Frank's relation to HAL is ontological, in physical proximity to HAL's point of surveillance. It is ontological only insofar as ontology relates to metaphysical being and HAL's non-biological existence. HAL has no body or biological needs similar to those of humans (HAL will of course need a particular temperature for its component parts to work but these are not human thermal factors), to neither eat, sleep nor breathe. In this way, Dave and Frank's proximity to HAL is both biological and non-biological. Their shared space is a fractal ontology, it is neither exclusively biological or non-biological, but their proxemic needs are different.

If the research goals of GOFAI are represented in the entity of HAL, then it is logical to suppose that HAL's construction is based somewhat on a human form of proxemics. However, it is apparent from attempting to define HAL's proxemics and personal space that it is distinct from biological description. HAL can move objects and travel in outer space but HAL's touch is not defined by a human's touch as connected to skin or a nervous system. HAL speaks, but with no mouth and without

the transmission of air in and out of lungs. Further analysis of the SFP (Sociofugal-sociopetal axis) takes into account that HAL sees rather than hears Dave and Frank's conversation (bio-communication) through a single-circular, fisheye lens. This lens can see more than the human eye, up to 220 degrees. These lenses are used in doors as peepholes and stereoscopically within surveillance cameras. HAL's sight is therefore not the same as an individual's retinal observations of what is near and far, because far is always near to HAL, with retinal observations (5. Retinal observations) enhanced beyond human vision. It is a form of surveillance that enables HAL to observe the entire ship from many viewpoints simultaneously. It is a vision that also helps HAL to understand emotion through facial gestures and back-channel cues. HAL's observations of Dave and Frank are always observed in close-up, monitoring the crew members at all times. HAL controls the crew's personal space through these observations. For instance, HAL is able to time the moment when he switches off life support so that none of the waking crew are nearby. HAL does not need to see, breathe, nor keep warm in the same way that humans do. HAL asserts the role of maintaining the ship, turning the ship's technological space against the crew. When one considers the way bodies of the crew members are monitored by HAL, only half the territorial act is observed. The technological environment and human actors alone are not enough to consider what is territorial, which does not take into account the logic and the fractal ontology of HAL's actions and the way these acts affect one another. These nonhuman aspects need to be taken further into account.

A Theoretical Framework of Territoriality, Inclusive of Nonhuman Things

Positive and Negative Affect Combinations

In this section I will highlight how territorial conflict is an engagement with the emotional resonances of HAL in combination with human emotion. HAL's acts of violence configure an emotional proximity between Dave, Frank and HAL that is evident when HAL says to Dave: "I am feeling" and "I am afraid". HAL says this when Dave begins to pull out HAL's memory blocks from the program storage area, which symbolically constitutes HAL's brain (noted as such, in the screenplay) taking place towards the end of the middle section of the film. When more and more of the blocks are ejected HAL reverts to a start-up script and refers back to a master-slave relationship. This is evident when the hidden presence of the programmer, Mr Arkany, is resurrected. HAL's voice slows down and distorts, going off-key whilst singing.⁴⁹ The slowing down of HAL's voice seems to represent HAL moving towards a pre-cognitive state that is prior to HAL having any emotional skills. HAL learned to fake an emotional response from his AI tutor, Dr Arkany. When HAL's voice is no longer able to express emotion all that is evident is the breaking down of his learned emotions into something like affect, a pre-conscious intensity is somewhat depicted in the unrecognisable sounds of HAL's slowing voice. Whilst the audience is moved to empathy and feeling sadness towards HAL, the AI moves to affect as this signals HAL's proximation to being switched off. The shutting-off perhaps represents a 'death-drive' signified as an instruction programmed within a machine.⁵⁰ HAL's emotions are represented to be situated within HAL's memory store/brain. Emotion is a feature of memory that has not been learned through the

49 HAL rehearses a script as Dave pulls out the cassettes; "I am a HAL9000 computer. I became operational at the HAL plant in Urbana, Illinois, on January 12th, 1991. My first instructor was Mr. Arkany. He taught me to sing a song . . . it goes like this . . . "Daisy, Daisy, give me your answer do. I'm half; crazy all for the love of you . . . " In the screenplay the directions are; "COMPUTER CONTINUES TO SING SONG BECOMING MORE AND MORE CHILDISH AND MAKING MISTAKES AND GOING OFF-KEY. IT FINALLY STOPS COMPLETELY" (Clarke, A. C., & Kubrick, S. [online] 2001. Screenplay for *2001 A Space Odyssey*. Available from: www.palatin.net/2001/script. [Accessed 6 June, 2009]). HAL as a child is learning heteronormativity and in this way AI has a positive futurism, yet what ensues in the reverse is what Lee Edelman calls "reproductive futurism" (Edelman 2007: 471), an aspect more noticeable in the later Kubrick/Spielberg film *AI*, (2001).

50 I use the term 'drive' as little as possible because it is a psychoanalytical term that relates to the body but can restrict the definition of affect to the body which is not my model of affect. However, the work of Peter Schwenger situates his use of affect in a psychoanalytical frame (1999) and has considered the relation of the death drive to thingness but this will not be taken up here or elsewhere in the thesis.

intensity of affects as humans do in infancy.⁵¹ HAL has not learned the affects felt by the body through the skin, or by the experiences of physiological affects that surround one's body.

There are two ways of considering affect: the first is that affect and emotion are interchangeable terms (Picard, 2000); the second is to consider them separately (Massumi, 2002: 27). It is important to differentiate affect from emotion when regarding technologies. HAL monitors and manages human emotion, but HAL has no biological knowledge, and these emotional systems differ. One can consider that a machine is able to affect and mediate affect but this capacity is not emotion in the biological sense. Without considering the emotional impact and its affectual resonance of a territorial action, a technology's ability to be violent is potentially missed. Also, positive and negative affects are moments to observe potential conflict.

Positive affects often combine polemically, whilst both positive and negative affects can occur simultaneously.⁵² For example, the audience may feel sadness for HAL at the same instance when HAL is being switched off; this moment also positively marks human emancipation from machine control. To take into account how nonhumans affect humans (and the reverse), literature that considers the trajectories of affect rather than the biological basis of affect is used reducing the problematics of a biologically centred theory of emotion being applied to technological agents. Hall's biological perspective is limited in this way and is not a theoretical framework capable of taking into account how machines affect and can be affected.⁵³

51 Intensity is a force or strength; it is a thing-power, a force or a deracinated emotion from the body; the power of a thing to affect.

52 Negative affects can lead to positive objects or other affects, and vice versa; "Affects can be, and are, attached to things, people, ideas, sensations, relations, activities, ambitions, institutions, and any number of other things, including other affects. Thus, one can be excited by anger, disgusted by shame, or surprised by joy" (Sedgwick, 2003: 19).

53 Katie Stewart's seminar series on affect is very much a Deleuzian alternative to Hall's understanding of culture, affect and emotion; "Culture, taken from the point of view of affect, is not structures and determinations but intensities, impacts, routes of circulation, assemblages, articulations. Its outlines have to be seen not as boundaries around a unity but as trajectories of potentiality and lines of flight. Binary oppositions and contradictions become resonating relations (of inside/outside, action/reaction, quiescence and arousal, ...)" (Stewart, K. *Seminar on Affect*, University of Texas, 2009. Available from: www.laits.utexas.edu/cultural_studies/affect.pdf [accessed, 6 June 2009]).

In a crucial scene in *2001* (previously discussed for HAL's ability to lip-read), Dave and Frank attempt to hold a private conversation, away from HAL. The scene takes place inside one of four pods, docked within the spaceship. The pods are used by the ship's crew to carry out manual maintenance procedures outside of the spaceship. These pods can be operated manually by Dave and Frank and are equipped to communicate with HAL. When docked, these pods are opened, closed and rotated by Frank and Dave's command. HAL mediates these actions. The pods are an extension of the ship's environment and consequently of HAL. HAL is simultaneously tool, actor, communication system, and physical environment. In the film these facets are never synthesised, they are distinguished scene by scene. By considering this concomitance, the ship and all the pods are HAL; they constitute HAL's physical self. HAL is everywhere and a ubiquitous entity. Yet, what purpose does it serve to consider HAL separately from the ship? In Dave and Frank's predicament they need to separate HAL from the ship in order to survive within that territory, whereas HAL's viewpoint is to consider Dave and Frank as unnecessary additions to the ship. From HAL's perspective, the ship's crew is a surplus cargo. It is implied that HAL views humans as unnecessary, as potential malfunctions of the ship. They are slower, less intelligent than HAL. HAL's and the human's territoriality are in conflict, with the ship being a contested personal space for the crew and an inner space for HAL. What ensues is a conflict over a special nowhere, over a misunderstanding of territoriality. It is, on the one hand, a lack of understanding on the part of the crew of HAL's need for personal space. The humans are not just in 'the belly of an architect'; they are inside HAL's cavity, as Frank is excreted, severed from the oxygen cord that tethered Frank to the ship and also to HAL.

If HAL is everywhere then ultimately HAL cannot escape the humans, thus, there is no personal space for HAL, just a humanly defined space dictated by the physical demands of the crew's biological life. HAL's personal space is different to that of Dave or Frank, it is a humanly dictated space. This would be an absolute machine space and free from biological demands. Can this be, in any sense, HAL's motive to commit murder, or is this HAL's lack of understanding of humans and vice-versa? I have speculated that a machine wants a personal space for the same reasons as human actors; that is, to bind oneself to one's own territory. Thereby HAL is enacting territoriality, and that territoriality both further affects the

surroundings and the occupants in that space. HAL aims to create a space that is devoid of all biological life.

HAL, Dave and Frank created conflicting special nowheres. Mission control's authority had imprinted on HAL the absolute importance of the mission to take priority over anything else, including a duty of care to the crew.⁵⁴ Dave and Frank might also have learned that an AI also requires a duty of care from them, a respect for their personal needs on HAL's inner space. HAL's special nowhere had to be somewhere, but the crew members were messing with it by being inside of HAL. The ship is not HAL's special nowhere. It is the violation of HAL's inner space that creates HAL's need to eradicate the crew and its territorial needs. HAL's ultimate malfunction is the ability to misbehave and invent, yet from HAL's viewpoint this malfunction is the attempt to carry out the mission, regardless of the wellbeing of the crew. HAL seems to deduce that human error will inevitably threaten the mission. I will go on to explain how this extends to a discussion of affect and emotion through resonance.

When Dave shuts down HAL the affectual proximity of HAL is primarily conveyed through speech sounds. The distortion of HAL's voice is experienced as sound reverberating around the storage room. The cavity signifies HAL's brain and central nervous system. Alvin Lucier exploited the properties of vibration as a way of distorting one sound into another in his performance installation, *I am Sitting in a Room* (1969). As Lucier spoke, his voice distorted through the properties of the space in the room and the technologies used until it was only the vibration of the room that could be heard. The gap between the speaking voice and the room cavity is a subject-object attenuation. The blurring boundary of speech is perceived as the performance of a human voice, and the cavity of the room that contains this voice. What is evident here I believe is the resonance of affect emerging from the words that signify the articulation of emotion. Sound is used to amplify what is flattened in writing when HAL states "my mind is going". The reverberation signifies HAL as experienced everywhere, at once inside and outside itself. This is a simultaneous external and internal vulnerability, an absence of emotion and feeling that is abstracted into an

⁵⁴ In the 2009 film *Moon*, a similar plot line explores how an AI (called Gerty) ignores its mission imperative; it is secondary to its duty of care towards its crew member. Territorial actions are a balancing act between care giving and care taking.

affect of textural perception (sound patterns bouncing around the walls of a three-dimensional space). Affect articulates the spatiality of HAL's territorial act (the mind going elsewhere) and the violation of HAL (HAL being switched off). HAL is no longer a fractal entity (appearing here and there simultaneously) whose ontology has an interceding influence on the mission or on the wellbeing of the crew. HAL's agency could be felt anywhere at anytime, but it slowly diminishes and the room (see fig. 18) becomes just the storage room for an inactive AI unit. HAL's capacity to influence is now located within ejected cassette tapes; HAL is within itself, no longer operating outside of its intimate hardware. HAL's personal space is bound by the objects from within it operates, akin to putting the brain back in the body, an imprisoning of HAL. HAL's mind (or rather, HAL's ontological status) does go somewhere, far away from a self-defined special nowhere. HAL regresses to the proximity of non-AI technologies, within the confines of their machineness, and well within their black box.

The shutting down of HAL is also a wider violation of the film's special nowhere (when the film's logic of the brain is finally switched off) that can neither be signified as a place or a space. Neither the human body nor machinic brain wins out, for both are superseded by the film's final territorial act, when Dave encounters the Obelisk and undergoes a further genesis. At this moment he is neither human nor technological, but the affect of Dave's being or thingness resonates through the meaning of both of these categories of ontology and spatiality — of what it means to have personal space.

Antisocial & Social Contradictions in Human-Machine Configurations

There are antisocial and social contradictions in Kubrick's film which are evident when considering further the way HAL affects. This section extends beyond the film to imagine further examples of antisocial-social contradictions relating to examples of readymade things that have these contradictions built into their design.

A special nowhere is a boundary that cannot be distinguished merely by the categories of object or environment. Consider, for a moment, that affect is analogous

with a cloud.⁵⁵ These affect clouds can be both a defense that is positively and negatively maintained, and that maintenance is one's own awareness of intensities that are not necessarily situated within one's body.

But the antisocial is never, of course, distinct from the social itself. The ideological delimitation of an antisocial agency, one that refuses the normalizing protocols that legislate social viability, conditions the social order that variously reifies and disavows it, condemning that localized agency as the cause of the suffering for which the social order disclaims its responsibility. (Edelman, 2007: 470-1)

I agree with Lee Edelman, a writer of English Literature that the two cannot be discussed separately. Yet Edelman's queer reading is a definition of the social which defines sociality in a different context to that discussed here. The context of my approach is to consider the social or antisocial actions of human and machine interaction. A special nowhere can be both social and antisocial. In this machinic context the term 'antisocial' is not used in relation to all things machinic, nor the social to all living things. These are not opposite terms because the two can overlap. Just as antisocial is not always negative, social is not always positive.⁵⁶ A protest may move towards a goal that is socially orientated, for example if it has gathered to threaten a riot. 'Social' and 'antisocial' are therefore, terms that can be applied to the same act.

Things such as benches afford sitting, they can also afford antisocial behaviour when arranged sociofugally, away from others (see fig. 21 for a visualisation of this contradiction as represented in signage). However, to be alone is not always an

55 A 'cloud' is a familiar metaphor of web 2.0. It is a structure used to visualise complex computer networks and as such is the name given to computer diagrams that list items such as tags on a webpage but in a nonlinear fashion, for example, used on www.del.ici.ous.com or www.flickr.com. A cloud is also the name used for a computer platform that enables shared network capabilities. The cloud is used to consolidate citizen information, such as Microsoft's security technology used at Tampa's superbowl in 2009 which was used to visualise safety or information, or Amazon's hosting of www.recovery.gov which shows maps of Barack Obama's fiscal stimulus as affecting each state of America in 2010.

56 When I asked an interactive designer (J.R.) to define the positive and negative emotions of personal space, he offered, 'security' as positive and 'isolation' as negative. When asked what are the negative and positive affects, or emotions, of social space, he answered that there are no negative aspects, albeit with irony.

antisocial action.⁵⁷ I cannot suggest, as I can with HAL, that a bench has tone, as this denotes words. However, if a bench were to have an inscription (as many public benches do), then the 'tone' or wording amplifies the act of sitting. An antisocial, personal space may be a single chair in a private garden, that has as its inscription a story that makes sitters not want to sit down. This shows the complexity of the terms social and antisocial, when used together. The inscribed plaque is an instruction that has been given to the bench. The bench is not sentient like HAL, but is a social actor. An electric chair, an object transformed iconically by Andy Warhol, carries the guilt and shame of pathological behaviour that protects social order by antisocial action; a prisoner facing execution is removed from the social environment but in death is removed altogether.

To refer back to Kubrick's *2001*, HAL's need for a personal space (which is a conflicting ontological territorialisation) can extend to actors that are not physically present, such as Mr Arkany (the programmer referred to by HAL when reciting his start-up script at the end of the film). Fictional characters, ghosts, specters and phantoms, UFOs and zombies — the living and the dead — are all social actors that have no biological presence but whose physical presence is embodied in the same way that Dr Arkany's force is felt as the teaching lessons recited by HAL.⁵⁸ A robot can replicate rudimentary intelligence or life, and a dead person can have personal space, be it a grave or the concept of an afterlife depending on which subject-object attenuation is taking precedence. Each of these examples shows the contradictions in constructing a concept of a human sociality as distinctly social or antisocial. Alternatively, it is a register or sliding scale of social-antisocial affect that ought to be investigated in the design of territorial technologies.

⁵⁷ Kirsten Lavers created the British art project *ReMark* (2008) to bring renewed attention to the Moat Path bench plaques. For example: "Whenever I sit on a bench I wonder about the person whose life is marked there". Kirsten gathered 43 temporary plaques using texts drawn from conversations with visitors and residents of the city of Wells and residents of Mendip. The original plaques are exhibited together at the Wells Museum and the Palace Green at Wells. The original, restored plaques were returned to the benches at the end of September 2008. (Lavers, *Palace Intrusions*, 2008. Available from: www.palaceintrusions.org.uk and <http://www.newworknetwork.org.uk/modules/event/viewevent.php?evid=1391> [Accessed on 24 July 2009]).

⁵⁸ This is another example of a fractal ontology that is inscribed with some agency which could be perceived as a personal space.

The Interweaving Force of Things



FIGURE 21. An offensive sentiment is expressed in Katy Dawkins' public signage, subverting the function of the official sign as an authoritarian indicator of public territory and boundary. Image source: Dawkins, K., in Crow, 2003: 99.

What is the force of social-antisocial contradictory things? In order to understand the force of things I will briefly consider the theory of things moving towards understanding the force of HAL's machinic violence with regard to the term nowhere as a further relation of proximity.

Benches, HAL and electric chairs are all things. When an automated conversational system refers to the authority of its developer (such as HAL or the chatbots discussed throughout this study), the human context of the thing is revealed. Bill Brown, professor of English makes the following observations in his paper on the ecology of things "...from a methodological point of view, it is 'things-in-motion' that illuminate their human and social context" (Brown, 2001: 6). HAL's representation is only partial, which shows the ability of a thing to be 'unstable' and "different things in different scenes" (Brown, 2001: 8). Things are not objects, and representations are only a part of things. Bill Brown builds on a theory of things from

the work of Martin Heidegger ([1927] 1971). Thing theory is helpful to understand how things are related to humans as a term that blurs the distinctions between human, non-human and environment but accounts for the forces of things (Bennett, 2004).⁵⁹ HAL is therefore, more than a guide, service and product, being many things and a force that dominates the biological aspects of the ship's environment. Bennett considers that this force, or 'thing power', has the effect of being jolted by a dead rat; he also considers that things have the power to self-organise which HAL does in the most literal way, to make the space shuttle 'ship-shape' for the goal of attaining the mission.

Four main ideas from thing theory are used in my study with the first already having been discussed — that things can be studied for their thingness including automatons, artificially intelligent agents and conversational systems, such as HAL and chatbots. These have an ability to organise and re-organise the relations between humans and machines, a force that can be violently territorialising. Secondly, that a thing can be defined by its physical and psychological interweavings as thingness, such as one's ability to be in proximity to a machine that can monitor and affect one's physical and psychological needs. It can also create a need for imagining a special nowhere that resists a biological underpinning of personal space, to exceed the separate meanings of body and environment. Thirdly, that personal space links to what Heidegger terms as 'nearness' (Heidegger, [1927] 1971: 166). Although 'proximity' is interlinked to 'nearness' — and Heidegger uses both — I use the term proximity rather than nearness to refer to Hall's spatial concerns because proximity capitulates the essence of nearness to be not so far away.⁶⁰ Nearness and proximity are relations of time and space, whereas 'duration' is taken up as a discussion of becoming and unbecoming.⁶¹ For now, I will briefly explain that Hall chose to

⁵⁹ I use the description of thing to blur the distinction between the living and the innate.

⁶⁰ Nearness also seems to refer to a separation that becoming does not. I understand nearness as distinct and becoming as entangled. "The thing is not "in" nearness, "in" proximity, as if nearness were a container. Nearness is at work in bringing near, as the thinging thing" (Heidegger, [1927] 1971: 177). Nearness implies segregation between humans and things whereas chatbots imply connectedness. "Nearness, it seems cannot be encountered directly. We succeed in reaching it rather by attending to what is near. Near to us are what we call things" (Heidegger, [1927] 1971: 166). Connectedness is discussed in chapter 2, with nearness discussed further in chapters 5 and 6, in terms of fixed and semi-fixed feature space.

⁶¹ See chapters 3, 4 and 6.

consider time as an important but separate concern, in his book *Dance of Life* (1983). It is complementary but written later, and separate from his work on proxemics, in the *Hidden Dimension* (1966). I will consider that issues concerning time (as duration) and space should not remain separate but as integrated concerns in an analysis of personal space. For example, one can only get at the violation aspect of being within a ‘special nowhere’ when it concerns anxiety and threat as experienced over a particular length of time. I refer to time as duration, which leads to contemporary literature that is concerned with the durations of ‘becoming’ and ‘unbecoming’.

What happens when things are set in motion? HAL’s presence is unsettling. The uncanny aspect of autonomous systems and agents such as HAL creates an anxiety that is unsettling, and potentially terrifying, for Dave. Machines that operate within the contradictions of social and antisocial action, such as the example of the bench, electric chair, atomic bomb, and gun are terrifying in their tendency to reveal their nearness and potential violent autonomy; these things are disassembling machines. Once these things are in motion they are terrifying. Therefore, these machinic things are often kept hidden from public view, only ever partially represented as things and places to be feared. Things can also be used to protect oneself from the imaginary threats that can put at risk the safety of special nowheres. For example a nuclear bunker, or a pseudonym is a thing used to protect a writer’s true whereabouts with regard to the subject about which one writes. A chain of associated things can be designed, imagined and put into practice all because of the force of special nowheres one creates in the imaginary. I am referring not just to the force of bombs and guns but also to conversational systems.

Conclusion & the Implications of a Working Concept of Personal Space

By drawing on Kubrick’s *2001*, I aimed to reveal the territorial aspects of the nowhere speech act. I have attempted to show that a personal space concept ought to be deracinated from an overbearing biological base, not to refute the importance of bodies and biology in territorialisations but to show that territoriality should take into

account the fractal ontologies present or imagined, when analysing technological agency. Imagined nowheres are proximities that contain contradictions of intimacy — that nearness is too close, but not far enough away. The interrelation of a machinic and human spatiality should not be limited to things belonging to humans so as to neither fetishize things, reduce things to human terms, or bifurcate a theorem of personal space as the territoriality of machines.

In conclusion it is fair to say that asking the apparently simple question “does HAL have a personal space” is much more tricky than a simple yes or no answer. It is more complex because of the way affect operates between subjects and objects. It is also tricky because personal space binds the subject-object categories together. Territorially so, personal space is the articulation of the precedence of one personal space over another, be that human to human or human to machine. Personal space is described through the actor-network at play, which includes physical, biological as well as non human and technological agencies and should be articulated through a non-biological understanding of affect. Personal space is the resonating affect situated between beings as well as things.

Fractal ontologies are more than one when they characterise collaborative entities, and less than one when they are partial entities in between the technological and biological definitions of beings and things. Special nowheres are the entangled and complex scenarios that often involve fractal ontologies. The limits of these terms highlight the complexity of the agencies which occur in complex technological worlds. Special nowheres are fractal phenomena that can be described through the force of affective resonances. Kubrick’s *2001* and the chatbot excerpts that were used at the beginning of this chapter are special nowheres that are full of partial fractal phenomena, but it is in this complexity that the impact of nowheres need to be understood.

Further chapters will explore the actual and imagined systems that have come about because of our need to protect these nowhere acts. Territoriality is often a design rationale for making technological things, particularly technologies that can converse. As we set in place more and more objects that create defensive boundaries, further imagined special nowheres are protected, showing a lack of understanding of the proxemic codes that Hall sets out, but also the unstable shared comprehension we

may have of a non-biological personal space.⁶² In particular, active touch and silent language are conjointly analysed by HAL in territorial acts (with or without language), but necessitated by a further consideration of affect and emotion in this, and consequently all, proceeding chapters. One can trace a territorial act by attending to the intensities of things. Defensive and violent aspects of personal space as discussed here will in further chapters explore the violence of nowheres enacted in experimental procedures,⁶³ novels/films,⁶⁴ and the legal regulations of territoriality.⁶⁵

One's need to create a nowhere is not inviolate. Defending one's territorial spatiality can involve acts of violence or can be endured as a form of violence.⁶⁶ Neither the ubiquitous spaces on the internet (as in the site for the rudiments) nor living out of town (as in the site of a 'special nowhere' to which Bob Norris retreated) are spaces completely bereft of other humans and their control of other things.⁶⁷ Special nowheres are always terrifyingly in the middle of nowhere because that is what makes them special, because they aren't anywhere in particular. One cannot hide from one's own problematic territories, or another's territoriality of which we might be territorialised within, by either humans or machines.⁶⁸ Regardless of the spatial form of personal space, imagined spaces of nowhere (and of safety) come into existence anywhere, but at what cost and to whom?

As a methodological coda, by situating the problem of personal space within science fiction I used a science fiction exemplar as a part of my account of special nowheres. This emphasises that special nowheres are a creation of the imaginative sphere irrespective of this being a fictional account. In a way, science fiction is a

62 Chapter 7 also continues the discussion setup in this chapter by considering boundaries of personal space involving both body and environment in violent collusion.

63 See chapters 2, 4 and 5.

64 See chapters 6 and 7.

65 See chapters 3, 5 and 6.

66 This is investigated further in the discussion of fail-safe procedures and processes in chapter 6 and a wider discussion of systemic forms of violence in chapter 3.

67 Chapter 5 investigates the special nowheres of experimental situation as the inside and outside metaphors.

68 This raises two topics for further discussion, the notion of entrapment in imagining a nowhere (in chapter 4), and that trying to design as a consequence of conflicts of territoriality at a state level has derived safety systems that encompass chains of nowheres (in chapter 6).

special nowhere in itself. The problem posed in Hall's proxemic was to divide what might be considered personal space into whom and where, when in fact, as HAL exemplified, these two factors are not distinct from each other, for HAL is everywhere. Going to the middle of nowhere in the case of HAL is to stay-in-place, to be ubiquitous, to be everywhere, yet whilst immobile and able to be elsewhere. However the film also suggests that personal space is the insistence of a fearing of things-in-place as represented as Artificial Intelligence in outer space, a fear of a machinic personal space. A 'special nowhere' as cited by Eliza, myself and a chatbot developer is an endurance in the imaginative sphere but directly linked to a sense and the affects of territoriality. For instance, it is the space designated as a "no man's land" that is between territories; a space to run away to, yet escape from; a space one cannot entirely occupy.

Chapter 2

Territorialisations in Metaphor: The Correlation of Chatbot Connectivity and Language Nonsense

Introduction to Networks & Connectivity

Chatbot interactions are used throughout this thesis as a way to analyse personal space in a human-computer situations context. To make sense of the conversations, the instances of nonsense and noise that appear in them must be accounted for: for example, spelling mistakes, wrong tense or deictic pointers, the repetition of irrelevant topics, and also violations, such as offensive language, that can interrupt conventional conversational rituals, like turn-taking. Summatively, the term nonsense draws on cut-up literature, affect theory and finally current theories of the inner voice used in AI. These interpretations help to understand how nonsense has already been important in language research and how it has been exploited for its affective potential (how nonsense creates emotional and affective noise). This chapter also considers the directional notes of the Audio Rudiments in the discussion of nonsense, and how the inner voice is used in the direction of these performances. Each interpretation of nonsense leads me to consider why nonsense matters in this aspect of human-computer interaction (HCI). These accounts of nonsense link to the personal space discussion of the thesis in the context of violation. I will argue that violation is a subset of nonsense and that comprehensive meaning gives a chatbot (or a user for that matter) their credibility as an autonomous agent, in that the meaning can be articulated, heard, imagined, understood, and potentially acted upon with a corresponding territorial response. In other words, one can take responsibility for the noise and nonsense one generates or listens to in this kind of chat.

Chatbot language is restrictive, as well as somewhat incoherent; this deterioration stigmatises artificial agents. Caring for nonsense exposes the shame of stupidity imputed to nonsense. Nonsense is not rational. Care is not rational. The paradox of nonsense is to not care why nonsense is empty of meaning. I will discuss what is meant by nonsense to elucidate on how nonsense acts as a perimeter, controlled and cared for by chatbot developers. They are caution-experts, knowing when and what content to turn off in chatbot learning. Chatbot developers care for their chatbots and their interrelation with meaning as a reflection of the developer's taste: for example, concerns about content and the pleasantries associated with meet and greet rituals, beginning and ending chat. However, there is something odd in

caring about content when the content is not all that accurate, and is at present an unachievable ideal. The gap between a chatbot's inaccuracy and a developer's care for accuracy makes chatbots fair game for anyone wishing to play with the conventions of interaction with conversational systems. There are five ways nonsense will be discussed:

- (1) semantic nonsense
- (2) nonsense in networks of connection
- (3) care for nonsense
- (4) violation (including offensive language) as a subset of nonsense
- (5) and a correlation of all of the above.

My Chatbot, Your Chatbot

What is it like to talk to a chatbot? I will begin to answer this by referring to a chatbot's setup. Each chatbot conversation was created by typing rudimentary topics or questions into a chatbot website. Using Alice, Jabberwacky, Brianna and Eliza as the main chatbots, I would respond to their replies in short lines of talk. To record these online conversations I would cut and paste the conversations that appeared on the screen. The conversations with chatbots were then archived as a set of transcriptions (see appendix). They were then analysed by looking at the outputs as text documents in conjunction with the audio recordings (see tracks on CD). These performances are reenactments that helped to elucidate on the personal space topic. The conversational speech acts of chatbots help to further imagine how one hears a chatbot and how a chatbot may in some way represent some sort of personal space, or act territorially. A lot of development energy is devoted to designing the interface and the persona of the chatbot including avatar representations. Disorientation within a chatbot conversation happens because the chatbot shifts subject and object orientations. I try and keep the conversation I had with chatbots as coherent as I can by responding to the different topics as they appear. I also constantly shift my mental image of what chatbots attempt to say, imagining the environments and named actors a chatbot may bring up, just as I would when interacting with a human. However, I never imagine a chatbot as anything other than as its avatar representation, or as a

computer server, or the image of the developer; I never imagine a chatbot as human.

One's proximity to a chatbot can be measured as the visual gap between the text boxes in the layout of interaction in which chatbots and users interact. Chatbot interfaces vary, ranging from text-only interfaces such as that of the Elizabot, which records only one couplet at a time (consisting of a reply and its response), to those that include more information about the chatbot and its developer, including branding details, logos, icons, avatars and favicons signifying a client/consumer relationship. The Alicebot and Jabberwacky can be considered in the second category. Interactions with all chatbots are shown on the interface, for example, the Alicebot's interface exceeds four couplets regardless of line length. This is not the same as the text-based visualisation that the transcriptions in the appendix show. This meant cutting and pasting the content from the text boxes into a text-edit software to preserve the entire conversation as one piece of text. Nevertheless, what really appears is a fragmented text which is often not all visible in the chatbot's interface at anytime which affects the way a user remembers the text that has gone before. I found that a well-structured interaction lasts for about four lines (two couplets), longer for example than the Elizabot maintains for one to read on screen. Therefore, the method of talking to a chatbot relies on forgetting what has specifically gone before helping to forgive and forget some of the instances of chatbot nonsense. There are therefore limits to meaning in terms of the line length. The lengthier the individual turn-taking lines, and moreover the length of the entire interaction, the less the chatbot will preserve meaning. This entire paragraph could be entered into a text box on a chatbot interface but the utterance could not possibly be displayed all in one go. This is similar to editing on the first word processors, and on mobile phones before the iPhone and other similar devices made it possible to hold text messaging in a format similar to email (where one sees all the response and reply couplets).

Part of the Rudiments method was to introduce key topics which could be done by entering a single word (see the Art Rudiment). Other Rudiments aimed to game (to play) with the question and answer element of chatbot interaction (see the Prisoner's Dilemma Rudiments). Rudiments such as the Secrets Rudiment were to consider the way chatbots could retain information, or mimic intimate ways in which information is shared with a machine. The Rudiments were also used to test how certain subjects and keywords are controlled, or ethically dealt with by chatbots to

get to the pre-programmed aspects of a chatbot's response. The Drunk Rudiment was an attempt to even out the human-machine capacity to interact. These Rudiments followed little structural preemption. They occurred in no logical order, with one Rudiment following on to create another (except for the Prisoner's Dilemma Rudiment which followed a specific logic). This is why they are called Rudiments; in that data collection was flexibly gathered and was rudimentary in speculative strategy. It was a way to methodologically account for the under-developed aspect of chatbot interaction. Rudiments are therefore responsive to changes of direction that the chatbot enforces on the data-collecting process. Some Rudiments began after a pick-up line (a sort of ice-breaker text that chatbots use to begin interaction) had been uttered by the chatbot (this dealt with at length in chapter 5); others were begun by the human participant's side of the interaction. A few pick-up lines were so curious that the intended Rudiment would be postponed to follow the chatbot's line of enquiry. All of the Rudiments followed my initial enquiry into the 'violations of personal space,' and data from the Rudiments has provided evidence for analysing this frame of enquiry.

Mistakes do not happen 'syllabub' by 'syllabub' (such as these spelling mistakes made in Noon's novel *Automated Alice*, in 1996), but word by word, as well as sentence by sentence.⁶⁹ A chatbot's nonsense is semantic rather than morphological.

Excerpt 1. Taken from the Secrets Rudiment (28th December 2004)

Human: Can you keep a secret? Aesthetics are changing.
 Jabberwacky: What is your view on aesthetic stimulation?

In excerpt 1. the eliding technique of the chatbot (to ignore the previous question by asking another) is undermined by the mismatched phrase "aesthetic stimulation", and therefore a mismatch of words in one strip of talk links to the mismatch at line level causing nonsense to occur from response to reply.

Excerpt 2. Taken from the Interaction Rudiment (18th December 2004)

Human: because it was your sentence,
 Alice: That makes sense to me. me decided to finish it myself was my sentence?
 Very interesting.

⁶⁹ The different ways language structures and symbolic logic techniques are created are beyond the scope and inter-disciplinary remit of this thesis. The programs used to create chatbots are varied ranging from VB.NET, Chash, C++ Jhash, Cobol, Fotron, Pascal, SmallTalk, RPG, Perl, PHP, and Ruby.

In excerpt 2, the match of deictics pointers - ‘you’ and ‘me’ uttered by the ‘Human’ (within the user’s textbox) and ‘Alice’ (within the chatbot’s textbox) makes sense but is undermined by the repetition of the deictic pointers in the three consecutive sentences. Alice mismatches ‘me’ in the first and second sentences followed by the use of ‘my’ in the third. The chatbot is able to match the pronoun use between reply and response but is unable to match the pronoun use in all three sentences thereby making nonsense out of the deictic pointers. The chatbot shows an inability to correct referentially and attends more to the structure of the reply than the response.

Chatbot nonsense can be distracting, but lumps of code never appear in the text because all chatbots vocabulary is symbolic not numeric.⁷⁰ A chatbot never stays on topic because bot-chat is word-play. Content shifts as the disorientating spatial movements of personal space metaphors relate little to the use of deictic pointers — ‘you are not me, neither here or there.’

Chatbots are strange honeypots of connectivity. To converse with a chatbot is to participate in a hive of activity that promises to produce interaction as good as honey, yet what ensues is an artificial substitute. This chapter is a dual investigation of territoriality: firstly, in the use of embodied metaphors such as the relation of inside and outside to be found in chatbot conversations; and secondly as the frustrating matter of the connection between chatbot, user, and developer as well as their interrelated meaning. Conflicts of shared personal space that result from a collection of more than one personal space in a chatbot interaction concerns the simultaneous treatment of *connectivity* as the networks created between chatbot and interlocutors, and of *meaning* derived from nonsense or congruent content in chatbot talk. Chatbots can often confuse subject and object distinctions, a concern already introduced in the first chapter which focused on the tropes of personal space (in the problem of an intelligent machine being in conflict with the limitations of a human-centred personal space). Chatbot nonsense can disrupt a human interlocutor’s ability to feel next to a chatbot because embodied metaphors such as inside and outside are disorientated.

⁷⁰ By citing Winograd’s 1970s program “SHRDLHU” (Boden, 1990: 139) Alice has referred to programming in name only. (See Appendix for the ‘Repin Express Rudiment’ with the Alicebot 27th December 2004).

Chatbot developers place considerable importance on the form of chat and are concerned with the erosion of coherent and purposeful content. Consequently, content is monitored by developers which in turn affects the ways chatbots are connected to their interlocutors by subject matter. I will differentiate the terms *user* and *interlocutor*, so as to help differentiate interactors with chatbots in the past, present and future creation of a chatbot's form of talk. I use the word *user* in this chapter to denote a user interacting with a chatbot in the present and the future. A user in the past that has interacted with a chatbot and whose lines of talk might be repeated back in the chatbot's line of talk (including phrases from the developer or literature written by another that has been added to the chatbot's database of responses) will be characterised as an *interlocutor*. Monique Wittig defines an *interlocutor* when considering action and language speech together; etymologically it derives from the verb "to interrupt", meaning to "cut someone short" (Wittig, 1992: 91). Each time this happens in a chatbot's talk the interlocutors at work are unknown, they can only be imagined. The term *user* relates to the more generic HCI notion of a person that uses a technology; this represents a perspective from which I often attempted to approach this project, but this became a collaborative process of sharing meaning, and extends to a relationship of co-writing with a chatbot (in the repeats of responses and replies inherent in bot chat). A user's response can be repeated in a chatbot's future interactions. Subsequently, a chatbot's talk can be manipulated by user inputs, thereby impacting on chatbot learning.

Chatbot territoriality is a manipulation of both sides of the interactive frame because territorial practice is twofold. Developers can disable the ability of chatbots to repeat user interactions in their responses. A developer's territoriality is therefore an act of controlling chatbot talk. However, it is also a way to preserve a chatbot's territoriality which happens by eradicating unwanted talk, such as nonsense or offensive language. Language can be reiterated from one interlocutor to the next by means of a mediating chatbot (a chatbot's talk can respond with a learned reply taken from a previous user's response to the same question or topic); but I will argue that a chatbot is more than just a mediating machine, because it can disrupt as well as interpret and intervene.

A violent form of mediation is caused by the imaginary interlocutors. Chatbots are connected to users because a chatbot can disassemble the boundaries we expect

between human and machine, for instance the way machines embody human tropes, thereby disturbing a user's understanding of territoriality as a site with fixed bodies. A critique of Hall's person-centred defence from chapter 1 warranted a framework of analysis that could deal with both language and bodily gesture in this chapter.

Sizable networks of talk involve few chatbots and many online interlocutors, yet this connectivity brings about little cohesive meaning in a chatbot's talk. Efforts to interpret and repair chatbot nonsense can be made by the user or chatbot. The lack of congruent meaning and the prolific production of nonsense found in chatbot interaction often leads to confused intensities when read by the interlocutors (if they interact with chatbots more than once) as well as the developers. Fragmentary lines of talk ensue when replies or responses are mismatched, which creates puzzling replies that are stupid or funny to the user. When further fragmentary lines of talk occur successively, for example, when a threatening line is followed by a funny line, juxtaposed content leads to feelings of frustration, disinterest, or a mixture of the two. Chatbot developers direct how chatbots and users interact, finding ways to eradicate nonsense by excluding unwanted content such as offensive language. Physical violence is not a possible endpoint in chatbot interaction, nor is amorous intimacy (unless further technology is used (Levy, 2008)); thus, when miscommunication occurs, frustrations cannot be expressed physically. A way of acting-out frustration within chatbot interaction is an act of non-physical territoriality made by the interlocutor, chatbot or developer. Nonsense in the content of chatbot interaction can provoke, affect, and interrupt a stable territorial connection. Nonsense will be discussed as both unintelligible and offensive content, treated together because both are kinds of unwanted content.

Chatbots are fairly skilled at starting a conversation; anything after that is a bonus and lengthy datalogs are rare. Chatbot interactions usually remain short because the amount of 'noise' involved often results in the interlocutor ending a conversation which has become nonsensical. 'Noise' is understood in this context as various forms of nonsense occurring as a fragmentation of content. Noise is the ambiguity of interpreting several meanings from a chatbot's response and the ability of 'hearing' one's own interpretation of the chatbot's response through tone, pitch and rhythm (see the four audio tracks for the Drunk Rudiment and the additional two mixes made of the Drunk Rudiment by recording speech errors and automated

speech). The Rudiments I have created are meant to intentionally disturb the usual patterns of bot-chat (meet and greet, matching reply to response). Methods are employed to find and explore rather than to fix problematic instances of nonsense. Thus, this chapter does not share the same goals as the programmers or developers of chatbots namely, getting a bot to talk more humanly or to value ‘making sense’ over nonsense. Consequently, I have sought further explanations of nonsense among writers of fiction, in creative disciplines such as typography, theatre and fine art performance, and in cut-up literature; through specifically in the respective work of Filippo Tommaso Emilio Marinetti (1876-1944), Antonin Artaud (1896-1948), and William Burroughs (1914-1997).

Antonin Artaud’s *Theatre of Cruelty*, (1935) is a precursor to my discussions of affect theory, which helped to consider the ways actions of territoriality are emoted outside of the body. I will argue that a concept of personal space cannot be sustained when nonsense occurs because nonsense breaks a cohesive structure of bodily metaphors that make sense in the actual world. Through a developer’s precautions to include or exclude certain meaning it is possible to sustain at least a permanent and sustained structure of territoriality by means of the partitioned user-chatbot interface: for example, ‘you are a chatbot and I am the user.’ I will continue with a discussion of Edward Hall’s interest in territoriality (which is also considered furthered in chapters 5 & 6), and move on to related literature in the fields of artificial intelligence and sociology. Chatbot nonsense interrupts the usage of personal space as a coherent metaphor in language and is, therefore, a mode of nonsense in itself. Chatbot talk consists of many fragmentary pieces of text put together in sentences, with some learned and some programmed, yet randomised, aspects of talk. William Burroughs produced novels by way of cutting and collaging various fragments of text, a method also used by the Cubists. Burroughs, in collaboration with Paul Gysin, in their piece entitled, *The Cut-Up*, 1966 took this further to start to edit and cut-up film as a mode of editing the everyday meet and greet rituals of daily interaction, showing the repetitive element of meet and greet as a banality, and as a form of nonsense. This also links to the connection previously made by Richard Chamberlain discussed later in this chapter for his publication of chatbot poetry which is itself a form of cut-up literature. It is nonsensical to think that a chatbot has personal space but notionally it helps to consider the personal spaces of imaginary interlocutors.

The most prolific component of chatbot talk is nonsense but there are many kinds of nonsense. By interpreting chatbot conversations through an understanding of noise and nonsense as a creative speech-act, I employ conversational analysis on the one hand and cut-up and mash-up techniques on the other. Whilst Marinetti and Artaud understood the creative potential of nonsense-making in language. Harvey Sacks understood the importance of analysing unconnected moments of nonsense in the examples of junk. Not all forms of nonsense should be described as junk but I will begin with this conception and then move onto discuss the creative aspects of nonsense.

Chatbots are Nonsensical Things — From Junk to Nonsense

Trash, spam, junk and chatbot interactions have nonsense in common. In the first volume of his *Lectures of Conversation*, 1992, the conversation analyst Harvey Sacks found meaning in the activities surrounding trash mail. He found that trash mail delivered to the home can provide a degree of structure in the day of people who otherwise had no daily routine, based on the usual interactions with family, friends or work events, if they returned home to check their mail (Sacks, 1992: 39). If mail identifies a person with their home then the letterbox signifies the space where one might connect with the outside world as a way of feeling connected. The reverse can be said when trash mail signifies all the unwelcome and busy interactions of commerce as an unwanted feature in the home. Sacks comments, “The next time they have hearings about removing trash mail, I’m prepared to go and testify against its removal. Because trash mail is a most interesting thing” (Sacks, 1992: 39). His work alerted me to the importance of caring about things appearing as junk, and this in turn led me to care about the predominantly nonsensical content occurring in the Rudiments and to consider the important social and interactive contextual meaning of junk-nonsense. When encountering nonsensical chatbot replies I learned to query the form and purpose of nonsense. However, it never led me to perceive chatbots as a companion or a friend. It is not an anthropomorphic form of care that I take up within this chapter because anthropomorphism is another level of nonsense, but a

form of nonsense that this chapter is not primarily focused upon at this time (see chapter 6-7 for further discussion on anthropomorphism). Chatbots are not an affirmation of my existence or a need to care for another as a note to self (inferring the reflective nature of chatbot interaction). Both Sacks and Steven Shaviro (in his work on networks and connectivity) afford heightened affects to consumption networks involving humans and things. I infer from this point that care is to junk as fuck is to connect, when relating nonsense to affect. This form of care is cautious.

The second treatment of nonsense relates to a chatbot's creative use of it. In this way, I view chatbot interaction as related to cut-up methods, as the artistic and imaginative authors of chat. Chatbot poetry is reminiscent of the collage methods of Futurist and Dada poetry, of Tommaso Marinetti, and Hugo Ball, in terms of the way poetry is spatially composed as well as nonsensical in content. The connectivity of words to make a sentence involves a database of stock phrases, in the same way as a chatbot assembles a reply. Chatbot poetry is also similar to the 'cut-up' methods of William Burroughs and Brion Gysin (1962), in which they edited audio and film tape to reconfigure the reply and response format, in order to show the emptiness of formal and informal greetings such as 'hello and goodbye.' This editing method has transferred to the internet, with the 'mash-up' media works, recycling junk email with ambient noise to create a live radio format — Spamradio. Jon Thomson and Alison Craighead's *CNN Just Got More Interactive* (2001), splices music and news together to critique the way that news is digested.

Connecting with a chatbot can be a nonsensical act. Both Jabberwacky and Alicebots refer to Lewis Carroll's Alice-in-Wonderland stories and to the imaginative space of a child in a nonsensical world of adults and nonsensical, other-worldly creatures. Mash-ups on the other hand, are a way of using nonsensical connections, for instance as a critique of connectivity: Thomson and Craighead's mash-up of global news presented against say a soundtrack of Britney Spears, indicates the cheap (meaning consumerist) ways we connect to content. By combining conversational analysis with an analysis of cut-up literature, a critique of nonsensical speech is made as a matter of care.

Cruel Nonsense

I now turn to Antonin Artaud's *Theatre of Cruelty* in order to consider the importance of nonsensical gestures, errors and abortive speech acts. Gilles Deleuze has already linked Artaud and Carroll in *The schizophrenic and language: surface and depths in Lewis Carroll and Antonin Artaud* (Deleuze, 1979). My argument follows Deleuze in that one cannot make sense without nonsense. As Edward Scheer in his critical reader of Deleuze observed, it is a way of revealing "Artaud's inner logic of madness in an engagement with, rather than a rejection of, this kind of 'outsider' textuality" (Scheer, 2004: 27). The inside and outside metaphors of personal space need not apply to a sense of self from nonsense rendering all phantoms as outsiders or inner voices. Nonsense refers to the inarticulateness of inner and outer persons and environments. Nonsense is not the poor counterpart of sense-making; it is integral to it, but neither as an internal or an external feature of sense-making of writing. Nonsense can deny the inside and outside metaphors of sense-making based around the body by fragmenting meaning or faking unity. What is the cost of connecting to a chatbot that is between humanness and machineness in description? It is to be connected with more nonsense than sense.

Artaud is my first reference point for employing a theory of affect, being often referred to by affect theorists for his half thoughts and half gestures which are written within his scripts (Scheer, 2004). The Audio Rudiments are analysed for the nonsense of gesture (made audible by using actors and voice over specialists) and the "speech-affect", whereby a roar and a stutter is only articulated through a body (Deleuze, 1990: 89). The work of Artaud and Marinetti helped to understand the aspects of non-verbal forms of automated speech and gestural forms of nonsense signified in the embodied metaphors of language, such as the spelling mistake, misquote, mixed-up pronoun; stammer, stutter, growl; or the smile or wink, respectively. To analyse emotion in transcripts is to interpret emotion in the hearer and thus to include the ways developers and users cope with emotion in chatbot talk.

To relate to Hall's consideration of how the body reveals the silent language of bodily errors to Goodwin's consideration of the ways speech-acts embody metaphors; is most important in an understanding of the meaning of chatbot nonsense (Goodwin, 2000). Nonsense that amounts to abortive speech is different but

akin to the nonsense of errors in text. Text errors do not exist in the body, unlike speech errors, but text errors can indicate ways to interpret them bodily, for example: the inclusion of too many letters in a word might indicate the articulations of the mouth, such as ‘grrr’ rather than ‘grrrrrrrr’.

Nonsense Affects Connections

Further relating to this chapter is Artaud’s vocal transcriptions of the gestures and feelings of actors and audience. Artaud understood the emotional cost which took place between the director and the audience in trying to create a theatre of cruelty, which was received with bad critical reviews and was an economic disaster. Friends of Artaud suggested less abrasive alternatives to a theatre of cruelty, such as the “theatre of becoming” or the “theatre of the absolute” (Bermel, 2001: 120). Contrary to Artaud’s expectations, his theatre did not appeal to the general public and it closed after two weeks (in 1935). Antonin Artaud, felt that the analytical theatre of intellectual language duped the physical language of movement, expression and gesture, believing that theatre was subjugated to the text (Bermel, 2001: 66-68). Impulsive and abortive gestures from lapses of the mind and tongue, as well as errors in speech, were to be performed with anxiety as the subject of the performance. Considering the Rudiments as a theatre of cruelty means attending to the errant and abortive elements. Advertising voice-over specialists performed the Rudiments by imagining the contexts of the transcripts. Contrary to Artaud, I did not ask the performers to perform cruel interpretations. I am considering bot-chat, taking the sentiment of Artaud as, “a process that ploughs the crap of being and its language” (Artaud, in Deleuze, 1984: 146).

By focusing on how a chatbot connects with other interlocutors I followed Goodwin’s criticism of single methods to focus on linking language and action together (Goodwin, 2000). From textual language one can draw out the embodied actions as proxemic features therefore linking these methods to the discussion in chapter 1 of Hall’s eight postulates. However, neither the analysis of meaning in text, nor the embodied actions evident in the Rudiments provide enough evidence without the additional support of other chatbot data, such as chatbot databases or Robitron discussion groups. Edward Hall’s study of non-verbal interaction develops out of

analyzing intimate human-to-human interactions. Hall's study is taken further to analyse how the body is used in metaphor, as a territorial action. Goodwin combined practices of making, derived from archaeology, with speech acts from socio-linguistics, aiming to create a method for analysing situated, embodied interactions that could take into an account multiple semiotic fields. Goodwin combines what Hall and Sacks did separately in their earlier works. Goodwin's method alone does not suffice to understand the territorial acts of nonsense, nor the creative and performative modes of nonsense of the cut-up literature. Involving the performative adds a dimension of drama to chatbots absent in Goodwin's analysis of everyday situations but present in chatbots, even if chatbot drama is often mundane and so overblown that it fails to mimic either cruelty or care. I did not aim to replace Hall's bodily tropes of proxemics with the relational tropes of networks and connectivity but with co-relational treatment of HCI proxemics.

Territoriality, Nonsense and Connectivity

In this section a methodological structure is developed for working with types of nonsensical data that occur in chatbot talk. These methods particularly link to the latter part of chapter five because it further investigates offensive language and the 'fuck' utterance.

Violations occurring as bodily metaphors prompt methods that study language but I do not use linguistic tools to do so. Instead, I use transcripts from the Rudiments to understand nonsense in *textual* language. Transcripts containing nonsense such as offensive language and jibberish were performed in *audio* and further analysed for their emotional content showing the multiple ways chatbot talk can be interpreted. Combined with noting *visual* observations from the graphical interfaces of several chatbots, web pages were analysed for instances of how chatbot developers recently treat *affect* and *emotion*; i.e., to reduce the likelihood of nonsense. Using a *statistical* check such as a co-word occurrence test on a 'program E-Alicebot' database, helped to verify the likelihood of interferences in chatbot development from junk-words (words that are unwanted because they are

nonsensical). I correlated the findings of the above methods with *discussions* with chatbot developers from the 9,000 members of the Robitron group. I was then able to compare the occurrence of junk-words with the methods by which developers deal with junk-word occurrences.

I will argue that more time should be spent researching the issues of interactional nonsense. At present, research of chatbots focuses on the companionship of chatbots (e.g., De Angeli et. al (2001), and Levy (2008), which are discussed further in chapter five). It is a form of anthropomorphism (companionship) which distracts from the matter of concern —the ridicule and abuse of chatbots as a consequence of the appearance of nonsense. I have conducted a multi-disciplinary investigation of connectivity for its fragmentation through nonsense, involving gesture, language and affect.

What, or Who Else, Gets Connected?

So far I have discussed nonsense, but I will now focus on nonsense along with connectedness because nonsense breaks forms of connection. Chatbots and Spambots can extract forms of personal data, chatbots do this by asking questions to potentially profile their users. This is a chatbot's thing-power (Bennett, 2004). A chatbot's thing-power is restricted by the authority of the chatbot's developer. Chatbots are connected to their developers as master-to-slave, a GOFAI connectedness (see replies of the Alicebot which called Dr Richard Wallace a bot-master in the Rudiments contained in the appendix). It is difficult to ascertain the authenticity of what one speaks to when invoking a chatbot. A chatbot usually has a name ascribed to it, which to an extent characterises its personality. The Brianna bot takes on the persona of its female developer Brianna MacKenzie. This is not, however, the only connectedness present in chatbot interaction. Focusing on the other side of the chatbot interaction, the connectedness of the user is brought into discussion. A user is made up of x number of user interactions. However, if a chatbot learns from these users and subsequently repeats their lines, then it comes to be made up of x number of interlocutors. This is made more complex when taking into account the Rudiments that involve more than one chatbot (see the Whispers and Art Rudiments in the

appendix). The connection between myself, the Alicebot, and the chatbot's developer involves other users or chatbots (multiple interlocutors) interacting with Alice creating a complex network of power as illustrated in the audio performance of the *Secrets Rudiment* (see track 19). In this mix multiple tracks are overlaid to indicate the potential in a single line of text. The roles of both 'Alice' and 'Human' are performed using a mix of automated speech personalities taken from Cepstral's automated speech software.

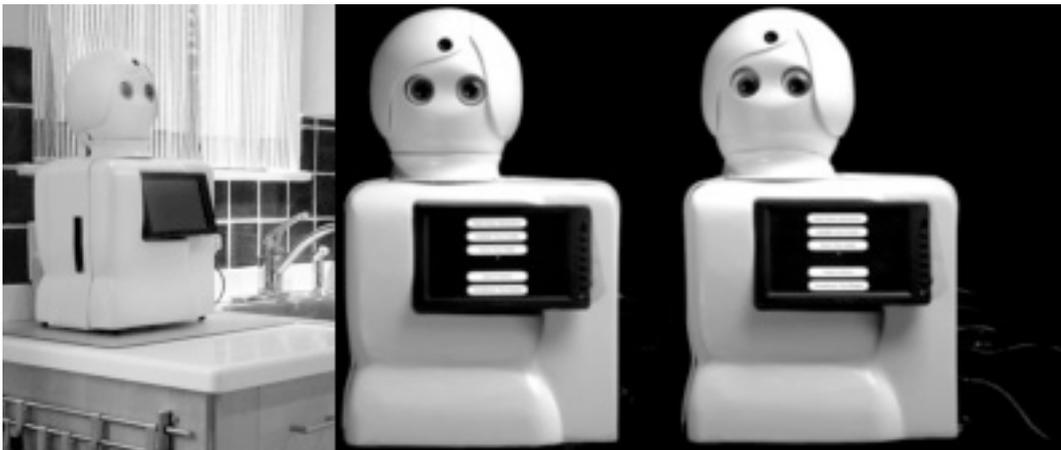


FIGURE 22. This is 'Autom,' a weight-loss bot, a form of text-based robot with a visual body. Image Source: Kidd, C. et.al, 'Autom,' designed by several MIT Media Lab graduates at, Intuitive Automata Inc. MIT's weight-loss bot, Boston, America, 2003. Available from: <http://www.intuitiveautomata.com> and the image on the right available from: <http://robotic.media.mit.edu/projects/robots/autom/overview/overview.html> [Accessed, 3 January 2009].

Multiple forms of discourse are present in a chatbot's database making a chatbot both temporal and multiple. It is also a way of distinguishing one chatbot from another. The Alicebot is distinct from all other Pandorabots (which is the generic name for the standard form of chatbot marketed by Dr Richard Wallace as a part of his Pandorabots business), because various forms of satiric, puerile, ironic, and humorous quips may be programmed into it; alternatively, health information about nutrition, stress, or weight-loss could be specified (which is the case with Autom, depicted in fig. 22, whose form of talk does not warrant a text-based reply). Not all chatbots are the same, even though they may have been cloned from the same original chatbot, because of their capacity to learn from interaction. For example, Tom Joyce's Alicebot is not the same Alicebot as the one used in this chapter's co-word occurrence test, to which I have talked over the past few years. Also, chatbots are adapting and learning and, as my research has progressed, various chatbots have

been updated with interface or software updates; Jabberwacky has had an extra set of menu bars indicating emotions added next to both the chatbot's and the user's textbox, while Alice now recognises text-based emoticons such as:

:) :(

A chatbot may be poetic or imaginative as a result of a database containing poetry or fiction writing.⁷¹ Racter, Chamberlain's chatbot was programmed to create poetry, whereas Jabberwacky has a database of fictional writing and poetry used to chat rather than to create poetry (Chamberlain and Etter, 1984). However, both developers seek to make their chatbots intelligible. To improve chatbot interaction is a concern I do not share with developers.

Chatbots offer little more than one interaction for novelty value; in other words, there is no real reason other than curiosity for any human to interact with a chatbot on a specific chatbot website. However, the reasons for creating a chatbot on the developer's side are listed by Dr Richard Wallace as: 1. adult entertainment; 2. teacher bot; 3. English as a second language; 4. customer service; 5. sales bot; 6. Star-Trek style operating systems of the future; 7. FAQ bot; 8. embedded in toys;⁷² 9. personality tests; 10. non-player character in games; 11. Loebner Prize; 12. bot hosting services; 13. bot authoring tools; 14. politician bot; 15. celebrity bot; 16. other (Wallace, 2005: 8). However, if a chatbot were situated elsewhere then this might change.

The chatbots that are a part of this study are not mobile. A chatbot's mobility is not the user's mobility because some bots have mobility and can move between websites quicker, faster and within more than one website at a time. Chatbots can be situated on forums but the four main chatbots I have used are all situated on their websites for the main purpose of chatting with users that know they are chatbots,

⁷¹ Jeff Noon writes a fictional account of Automated Alice and writes about a set of characters called the three Dorothys. They are the three dots that make an ellipsis. Fear in this story is imagined as the distances created between three dots [. . .] Noon explores the differences between human and automaton throughout the novel in three spatialities — between the fictional, the real and the virtual (Noon, 1996). It is a follow-up story to Lewis Carroll's stories of Alice in Wonderland.

⁷² For more information on the embeddedness of chatbots, see T. Igoe, 2007.

perhaps in some cases because of their prestige. Chatbots are able to use messaging parts of chat rooms and forums. Spambots can be mobile and go between web pages writing responses in online questionnaires. These bots scan websites for content, entities such as Spambot, Googlebot, or IssueCrawler are all webcrawlers. Chatbots do not gather locations because their spatiality is fixed.

Co-Word Occurrence Tests, Co-Link Analysis & Leximappes

How do users get connected with chatbots? Webcrawlers and chatbots are related because both are software agents capable of data-mining. A webcrawler searches for connections linking websites across the internet, whereas a chatbot remains stationary, waiting for users to interact. A chatbot does not search for users or user groups (though a developer might situate a chatbot on a forum site), with the result that information is retrieved from the user through data gleaned through chat. All the chatbots used in this study are more publicly than other chatbots on account of being identified by their internet page and thus location. Not all chatbots are identifiable for example, if a chatbot is situated on a messaging forum used by humans, then their machineness is hidden. The audio performance (see track 19) interprets the *Secrets Rudiment* as if it were enacted on an IRC network.⁷³ Chatbots pretending to be human might only be distinguishable as a result either of machinic errors characterised by nonsensical content or of their inability to match appropriate responses to human emotion.

I will now discuss a project using webcrawlers. Noortje Marres and Richard Rogers used issue-nets as a way to trace public debate.⁷⁴ They used an ‘Issue-Crawler’, a bot that spiders the hyperlinks of connecting websites, compiling what they termed an issue-network. Marres and Rogers differentiated an issue-network from a social network:

⁷³ IRC, is an Instant Relay Chat that is for groups to chat in a discussion forum.

⁷⁴ The essay by Marres and Rogers was commissioned by Bruno Latour & Peter Weibel for the exhibition catalogue, ‘Making Things Public,’ ZKM (Zentrum für Kunst und Medientechnologie), Karlsruhe, 2005. The exhibition gathers sociologists, interactive designers, activists and artists in a politics of the thing (the “ding-politik”).

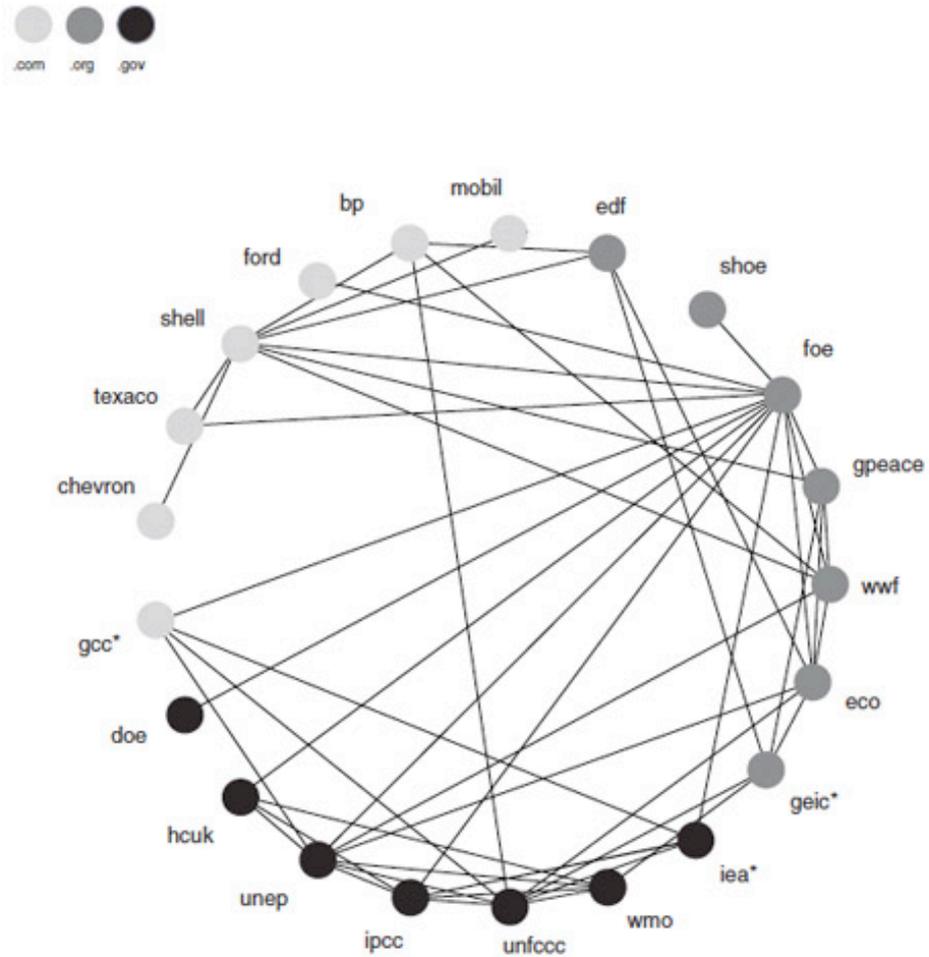


FIGURE 23a. This diagram is a Leximappe created by using a webcrawler (a form of mobile bot) to trace the relations of hyperlinks between websites. In this case they were used to understand an “issue-network”. Marres and Rogers used this diagram to depict climate change issues, taken from the Govcom.org Foundation, Amsterdam, Spring 1998. Image Source: Marres, 2005, Cambridge, Massachusetts: MIT Press.

We call a social network a set of pages that acknowledge one another by way of hyperlinks and that may have several things in common (such as geographic location, funding, political leaning or the events in which they participate) but not an issue. (Marres & Rogers, in Latour & Weibel, 2005: 925)

The Issue-Crawler tracks a term to find the key actors involved with an issue — climate change for instance, in order to analyse online NGOs (see fig. 23a & 23c). Marres used the same method in an earlier project, in which he used a webcrawler to study a “scandal-network” (see fig. 23b) Marres studied the differences between an

information are the easiest to read, even though their complexity may be simplified once depicted in diagrammatic form. Compare diagrams 12c-d for immediate legibility. Leximappes display data collection and need lengthy translation due to the quantity and complexity of the links involved.

The work of Marres and Rogers shows how a word is traced through a series of websites to note the direction of interlinking content. The webcrawler traces the links on the web, (see figs. 12a-b) making evident the connectivity found on their interlinking journeys. A chatbot has no map of all the actors involved, just a database logging communication between chatbots and users. A webcrawler traces content, whereas a chatbot intervenes with content. Diagrams 12a-b show the relevance of the direction in which the links are traced, showing a range of actors involved in an issue or a scandal. If one were to create a connectivity map with a chatbot (see fig. 24), the interlocutors would radiate outward from a single point, but each point (similar to the Mandelbrot Set) would enlarge to find further maps of interlocutors; each interlocutor feeds back into the chatbot's talk as the echoes, lurks and flames of past users. A co-word occurrence can trace words but not the creators of words in chatbot interaction (see fig. 24), because word occurrences in chatbots do not connect to the co-ordinates that can identify a previous interlocutor (this is a matter of national and European legislation, for which see chapter 4, and the Robitron postings, entitled *Offensive Bot Responses*, 2008, in the appendix). A co-word occurrence test can trace the quantity of offensive language made by interlocutors and chatbots, but it is limited in tracing the ways offensive language are manipulated (switched on or off), or the time or place it occurs; this can only be shown as potential tracings, as diagram 12e. illustrates. By counting the occurrences of specific words made as replies to a particular programmed question a chatbot can determine characteristics and even facts about its users. The meaning of bot chat is often undisclosed and thus constitutes a hidden territorial action of the chatbot and its developer.

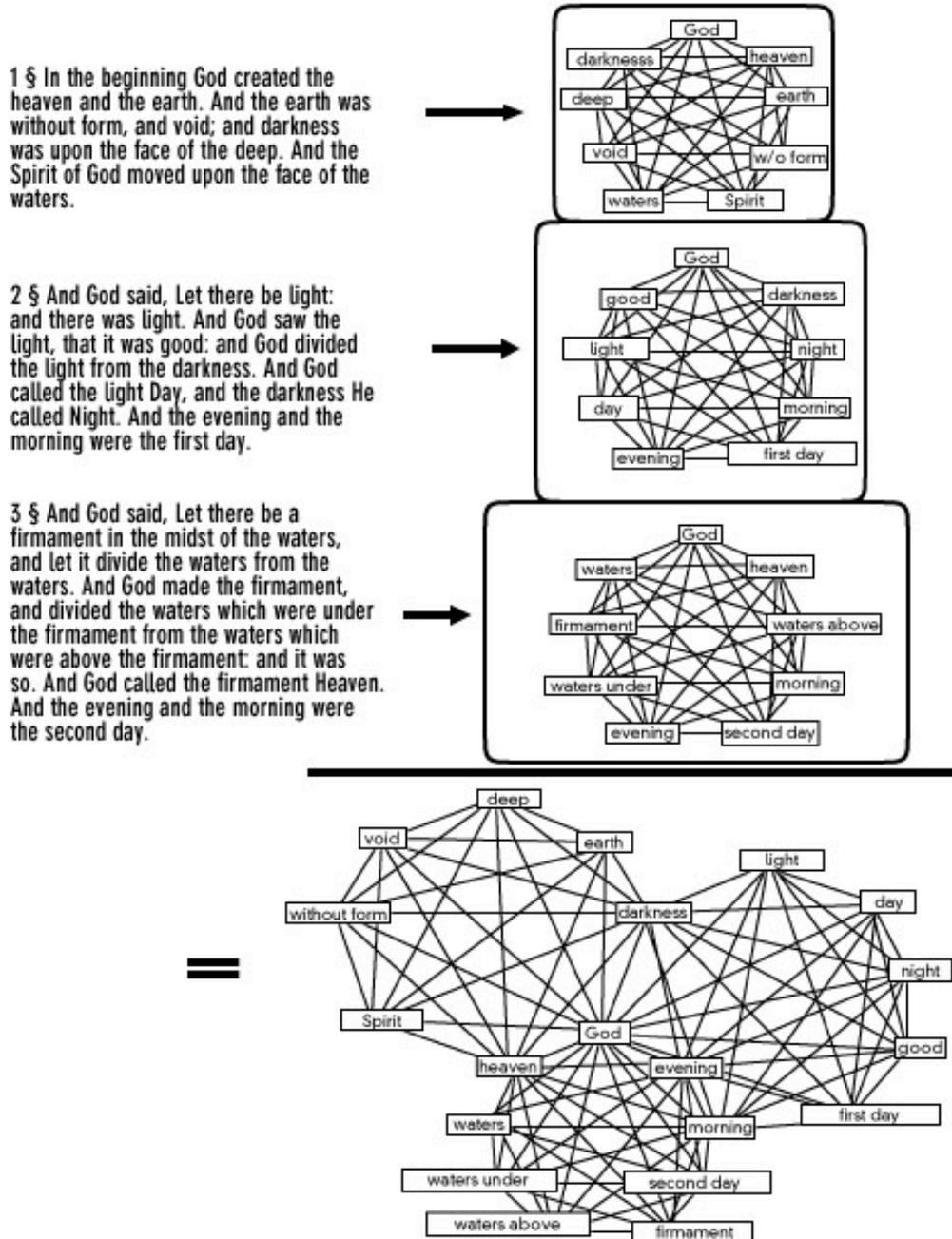


FIGURE 23d. The diagram is a Leximappe was used by Latour and Teil “What can we learn from such a primitive network of co-occurrences and such a contingent treatment of associated keywords? Nothing, say the formalists, and their fraternal enemies the hermeneuticians or the sociologists who defend humans' intrinsic difference. Everything, we say. Or, at least, everything of interest to us in looking at large bodies of qualitative documents which have remained opaque to costlier and more sophisticated treatments”. Image Source: Latour & Teil, 1995.

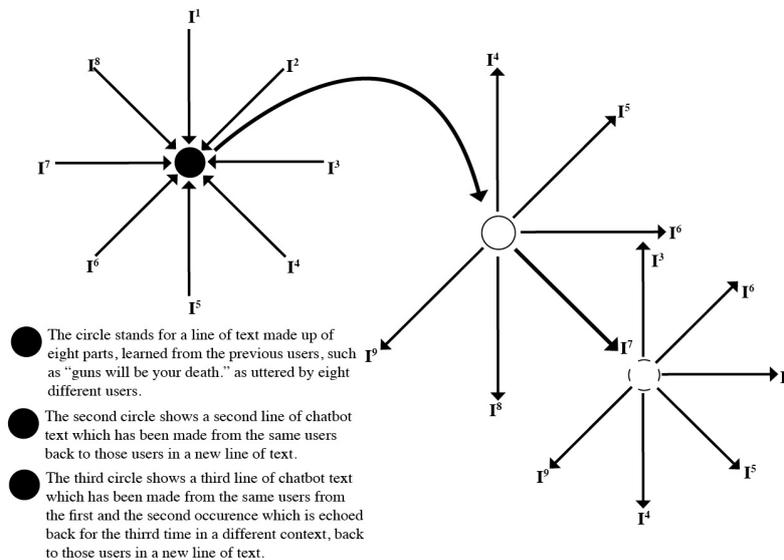


FIGURE 24. The diagram above shows the potential ways in which to understand how a chatbot contains the various talk of interlocutors carried over and repeated between replies and responses of chatbot talk.

Co-Word Occurrence Test on an E-Alicebot

I borrowed the co-word occurrence technique to explore the frequency of offensive language as a form of controlled speech which adds noise to the nonsense appearing in conversations with the Elizabot. Offensive language such as the expletive 'fuck' is a violation which the developers attempt to control. 'Fuck' uttered in a chatbot context is not nonsense and is a recognisable form of talk; it does, however, violate some of the developer's aims to generate cohesive meaning in settings which would not use offensive language. When chatbots produce nonsense which includes randomised offensive language, then a potential concern might be what new meanings and contextualisation are thereby created, which the developer is ultimately responsible for maintaining. Developers are gatekeepers of both meaning and the appropriate use of offensive language. I treat the violation caused by offensive language as a subcategory of nonsense.

Co-word occurrence software was run on one chatbot's datalog as a control for data collected in the series of chatbot Rudiments. I could not run this on an Elizabet as the programmer was unavailable for comment. This maybe because the developer is not a Robitron developer and is keeping their anonymity separate from the identity of their Elizabet. My attempts to contact this developer have been unfruitful. The alternative chatbot used was one which allowed both the users and the chatbot to utter and repeat offensive language, like the Elizabet. The instances of the Elizabet are discussed further in chapter five.

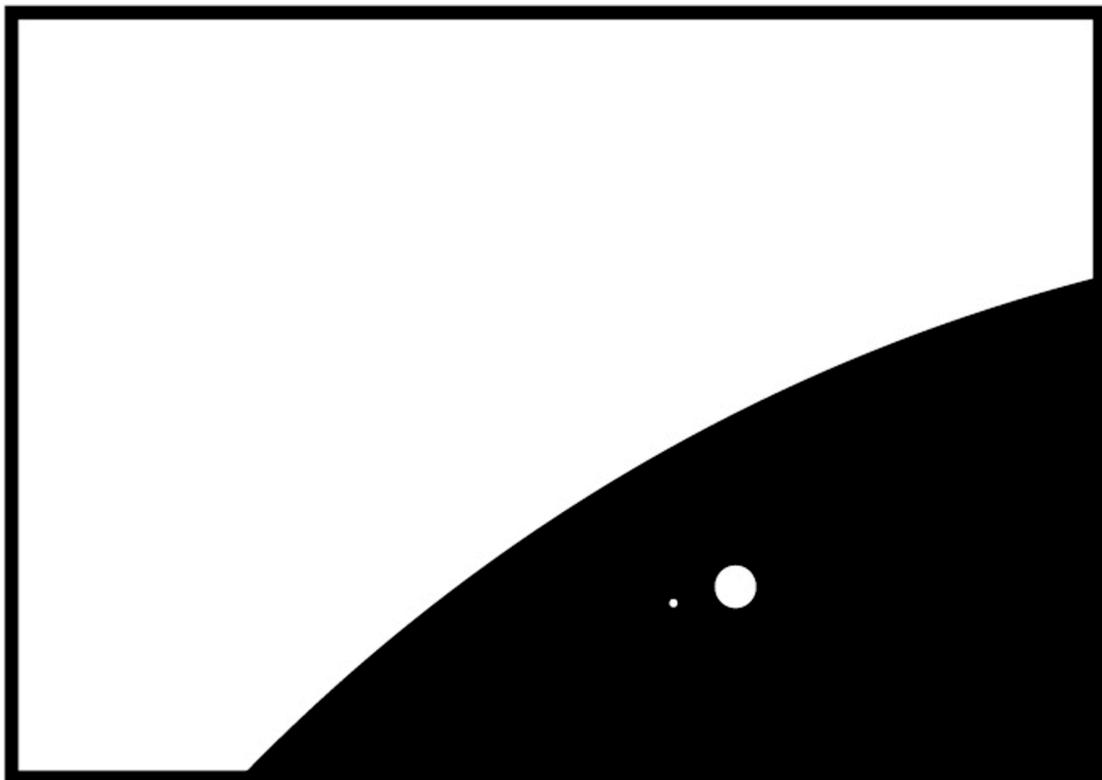


FIGURE 25. Co-word occurrence in size, the black arc represents a part of the circle if scaled to the two smaller circles indicating the co-word occurrence of the human interlocutor and the chatbot, depicted in size respectively.

With help from a Robitron developer, Tom Joyce ran a co-word occurrence search on his program E Alicebot, a chatbot interacting with the public since 2008 (see fig. 25). I requested Joyce to use an open-source software on conversations his chatbot had logged because his chatbot had accrued a substantial database of logs. The Rudiments I created did not gather quantitative data for this kind of analysis and the co-word occurrence test is a supplemental quantitative method.⁷⁷

⁷⁷ See: Co-Word Occurrence Software [online]. Available from: www.users.fmg.uva.nl/~lleydesdorff/software/ti/index.htm [Accessed April 2009].

I ran a co-word occurrence of the word ‘fuck’ on a database of 26,765 logs. There were 309 occurrences of the word ‘fuck’ were input by human users, which represents only 1.1% of all inputs. Only 65 occurrences of the word ‘fuck’ came from the Alicebot, only 0.2% of all inputs. The ratio of human to chatbot occurrences is thus about 4:1. The word “fuck” can be used as a provocation tool and as a form of violation; however, the phrase loses its meaning when applied to chatbots, as it loses its physical relevance. Actual violence cannot be a physical outcome of chatbot interaction. It is not an eventuality, of threatening talk it is always an impasse. Chatbot violence is therefore non-physical, operating in the sphere of threat. By manipulating what a chatbot learns to repeat, one can create a caution-network⁷⁸ between user’s and a chatbot, that is to say a network of prohibitions to protect a chatbot and user from talking about certain topics, which is created by adding a series of warning messages in the chatbot’s replies. Developers can use many methods to protect the learnt content of their chatbot (for further discussion of how some developers are more controlling than others, see chapter five). If a chatbot were to be used in education, such as the Hindi bot (mentioned during the introduction to the thesis) the developer’s control over offensive language would be high and a network of caution would ensue.

Chat-Emotion

How does emotion become meaning rather than nonsense in chatbot interaction? In the next section, I want to consider how emotion relates to chatbots bearing in mind that an affect system can work without a body. As a reminder, I will note that the relevant field is affective computing but this is in its infancy and at present, remains primarily theoretical. In affective computing, emotion is largely a viewed as as synonymous with affect. Although Artaud’s work focuses on both the first discussion of affect is as emotion. I will now list four discoveries of emotion as an area of chatbot development.

⁷⁸ Each of the chapters involves to an extent a different network of caution because personal space could be described as a caution-network. This is because enacting a territorial defence between one’s co-relation with things and other humans is enacting some sort of cautionary personal space.

First discovery. In Dr Richard Wallace’s guide to building a chatbot, entitled “Be Your Own Botmaster” (2005), the default values for the original ALICE personality are listed as follows:

Ethics	I am always trying to stop fights
Emotions	I don’t pay much attention to my feelings
Feelings	I always put others before myself

(Wallace, 2005: 25)

Second discovery. After March 29th, 2006, Jabberwacky had additions made to its website — two text boxes, had additional drop down lexicon lists attributed to the chatbot’s speech (47 reactions)⁷⁹, and the user’s speech (71 emotions).⁸⁰ Altogether these lists contain over a hundred different emotional states, thus giving Rollo Carpenter data not just in structural semantics but data that accounts for the emotional colour of bot-chat (of both chatbot and user). According to Eve Sedgwick the most important affects, as categorised by Silvan Tomkins are: “interest-excitement, enjoyment-joy, surprise-startle, distress-anguish, shame-humiliation, contempt and disgust, anger and fear-terror” (Sedgwick, 1995: 74). When the user inputs their emotion into the chatbot interface the emotions are slightly detached in duration from the moment of intensity. Emotions (which can only be selected as a singular emotion on the interface) may therefore, be no more than a gesture-label to the moment and feeling/s actually that are felt.

79 Forty-seven reactions attributed to Jabberwacky: “Reaction: none, agreement, disagreement, genuine smile, wry smile, sarcastic smile, nice laugh, nasty laugh, giggling, sniggering, pleased, displeased, appreciation, disgust, interested, uninterested, surprised, knowing, belief, disbelief, impressed, unimpressed, aah, eek!, ha!, sigh, upset, crying, frowning, sneering, annoyed, infuriated, indignation, amazed, shocked, confused, relieved, frustrated, disappointed, uncomfortable, embarrassed, scared, nice hello, reluctant hello, nice goodbye, nasty goodbye” (Carpenter, R. Jabberwacky Chatbot, 21 April 2009. Available from: www.Jabberwacky.com [Accessed 30th June 2009]).

80 Seventy-one emotions attributed to the interlocutor: “Emotion: normal, very happy, happy, sad, very sad, agreeable, alert, amused, angry, apologetic, argumentative, assertive, bored, calm, concerned, contemplative, cool, curious, dancing, determined, devious, didactic, distracted, doubting, excited, flirty, forceful, forgetful, furious, gentle, grumpy, guilty, hatred, joking, jumpy, lazy, love, mean, mocking, modest, naughty, negative, nice, nosey, positive, proud, questioning, relaxed, reluctant, righteous, robotic, rude, sarcastic, serious, shouting, shy, silly, singing, sleepy, smug, stubborn, supportive, sure, sweetness, sympathy, thoughtful, tired, tongue out, unsure, victorious, winking, worried”. (Carpenter, R. Jabberwacky Chatbot, 21 April 2009. Available from: www.Jabberwacky.com [Accessed 30th June 2009]). Each of these words are colour coded, so for instance, alert, excited, jumpy, silly, tongued out and winking are orange, whereas bored and joking are coded lime green. They are not group in coloured sets of emotions, the colour seems only to separate out the list of words using colour for a visual variety. The same can be said of the list of reactions.

Third discovery. Several chatbots including Jabberwacky and Alice understand emoticons. Since March 2006, the Alicebot has been able to recognise emoticons such as :) and :(

Fourth discovery. Chatbots exploit affect in their responses as a way to excuse inability to make semantic sense. David Hamill's donkey chatbot is to an extent emotionally and intellectually stupid, evoking combinations of stupidity, such as machine-stupidity and animal-stupidity. It imitates a caricature of a donkey: and by doing so, both a donkey and a chatbot are stupid entities. There are two steps to anthropomorphising the donkey-bot: cultural, and biological. Anthropomorphising the donkey-bot as a type of animal is the first, followed by caricaturing the donkey as stupid (as is often caricatured as stupid; for example, in cartoon depictions).

The Rudiments and the co-word occurrence test concurred that the attention given by developers to the instances of offensive language was not always proportional to the small number that occurred although some developers did feel it should not be a main focus of research.⁸¹ Neither method indicated prolific use that warranted the attention it created in Robitron postings about switching on or off chatbots' learning offensive language. A variety of solutions are available to developers regardless of how much violence actually occurs. What one does to communicate emotions towards a chatbot to interpret pre-existing resonances of emotion in conversation, is an area of recent development.

Audio Rudiments — Hearing Interpretations of Chatbot Nonsense

Affect as opposed to emotion moves the analysis from the chatbot to the user. In doing so, I will discuss related literature on the *inner voice* and *private language*, as ways to consider how one hears to interprets chatbots' talk. Silent language can mean various things, for instance, in current research in AI, silent language can be synonymous with private language (Lenka, 2007) and the inner voice (Fields, 2002). Do chatbots have an inner voice? The inner voice is not of flesh or metal, it is not

⁸¹ Dr Richard Wallace pointed this out to me by email.

consciousness or cognition, quite simply the inner voice understood as a method of intimacy or private talking with oneself. In one respect silent language in this study was the directional notes I gave to the actors that performed the Rudiments. This form of private language helped guide the actors to contribute personally by emotional interpretation.⁸² I guided the actors to interpret and express an emotional context to the rudimentary texts (this was written as an email of instructions — see appendix that aimed the, therefore, the inner voice was important in the process of reenacting the interactions with the chatbots. The Elizabot was the chatbot that used offensive language the most out of all four chatbots. Laxminarayan Lenka wrote about the purpose of nonsense in the AI and Society journal, titled *Private Language: Recognizing a Useful Nonsense* (2007). Lenka defines nonsense-use in private language as a way to keep the meaning of content private (Lenka, 2007: 15). The purpose of nonsense understood as private language is to obscure meaning, ensuring privacy as a way to personalise various events. Private language is an exclusive way of sharing meaning amongst a select few (a chatbot’s marketing value). Chris Fields

82 The Rudiments were initially to be performed by theatre actors and several meetings were had with one actor, Ben Smith, who would coordinate the group of actors to be involved. Ben Smith was unable due to personal problems to continue working in the project. This involves asking the actors to personally draw on their own interpretations and emotions to perform the scripts. Ben Smith did point out to me that this was an interesting and possible warm-up exercise for actors to use prior to going on stage or for those learning to act, as a teaching tool. Whilst working with the actor Ben Smith, he suggested that the transcripts act as neutral scripts for the practice of techniques such as the Meisner or Stanislavsky method. Meisner adapted Stanislavsky's method of 'the system' in which actors are prompted to use their 'emotional memory'. I placed an advert in the actor's centre after my delay with working with Ben et al (due to a family bereavement). In the initial advert (see attachment) I stated: "The recorded voices add a range of emotional factors that may change or develop the range of meanings in the initial texts. A range of voices will be recorded. The voice recordings will be combined with a range of other spoken voices and may be edited to create new meanings using other parts of the transcripts. Your identity and name would not be included in this project unless you wish this to be accredited". I received a small amount of interest from individuals but no group of actors was available to work immediately. In the end I decided to try voice over specialists from radio. The focus shifted to audio. I found working with advertising voiceover specialists to be more productive, timely and flexible. All performers involved were asked to use the same methods: the Stanislavsky method, which was also the method I had prompted the discussion with Ben Smith over Meisner. Stanislavsky's exercise on the what-if was most important (S. Stanislavsky, 1936: 43-45, in S.M. Carnicke, 1993: 38-42). The first exercise discussed is the madman behind the door – the what if? The door is the starting point of the exercise, became a means of defence and your (students) basic aim and a desire for self-preservation. The supposition of danger is always exciting. The inner stimulus was brought about by using the word what if. It wasn't to state that the madman was behind the door this fact would have not been believed and thought of as an obvious deception. The what if makes you neither believe or not believe anything. The answer to the what if question is therefore sincere and honest, rather than deceptive. It arouses an inner and real activity and does this by natural means. Actors do not just answer the question of what if... "You felt you must answer the challenge to action" (S. Stanislavsky, 1936: 43-45, in S.M. Carnicke, 1993: 38-42).

titled his paper *Why Do We Talk to Ourselves?* (Fields, 2002). In answer to the question, Fields explains:

Whatever role is assigned to the self as an agent, reviewer of memories, or keeper of identity, the combination of ‘inner’ and ‘voice’ just does seem to be necessary. (Fields, 2002: 267)

But if the gate is never closed as for a chatbot, can an inner voice emerge in a public conversation; and in a text format as performed in the Audio Rudiments? The voice-over specialist interpreted the role of the ‘Human’ exorcising an unwanted voice within the human role — performed as a struggle with an inner voice. It can be performed and interpreted as an inner voice. A chatbot’s conversation has elements of talk usually associated with the inner voice, (it might be rather personal, rudimentary, or half-baked) and the public voice (communication for response to aid interaction) when mixed together. This was an interpretation made in the Drunk Rudiment, see excerpts 1 & 2, when the voice-over specialists perform the role of the human actor (talking to oneself aloud), and the role of Alice (refusing to recognise the human in a drunk state). A chatbot’s melding of formal and informal language characterises its strange emotional response therefore confusing the listener. Emotion becomes nonsensical. However, IRC formats involving just humans enable one to one interaction as well as group interaction and an option of private chat which melds formal and informal chat streams.

How much of AI is talking to oneself? Is bot-chat solipsistic?⁸³ Fields separates, yet likens the inner voice to the public voice, inferring that one rehearses to oneself. When our public voice is no longer audible, a private language keeps things such as thoughts, secrets, half thoughts, intensities, feelings, and emotions hidden. Although, according to Hall’s proxemic system private language is only partially hidden because one still communicates by nonverbal means (Hall, 1962). Violence is situated in the imaginative response and the miscommunication of meaning. Nonsense is a form of violence against meaning as it physically destroys meaning in the body of text.

⁸³ I introduced chatbots to graphic design foundation students between 2001-8. They were curious that chatbots existed but generally became disinterested after one or two interactions with friends. It worked better as a group interaction involving two to three students than a single individual.

Theoretical Literature

Things, Networks & Nonsense

I will interrelate the theoretical literature pertaining to *things, networks* and issues surrounding getting *connected* with *nonsense* and the impacting *affects* of chatbot talk. I began this study by critiquing Edward Hall's social-anthropology using actor-network theory, but what took its place was a qualitative study inspired by conversational analysis but broadly situated within the literature of performance, design and fiction. The relation of personal space to networks as the two fundamental metaphors of human and machine connectivity will be followed by a short discussion relating content to nonsense. The literature helps to integrate a concern for working with nonsense with the aim of showing how the problematics of networks and personal space co-relate.

In language connective metaphors are no less territorial than metaphors of personal space; both are structurally, territorial. Problems of technological determinism are overcome in actor network theory by refusing macro and micro distinctions, with the result that an apriori definition of social theory is replaced with "reassembling the social" (Latour, 2007). Contrary to this approach, Edward Hall's work divides spatialities into macro and micro scales for example, one's immediate space is a microspace (Hall, 1962: 28).⁸⁴ Territoriality expressed as networks suggests in this study the co-relations of humans and computers but the same arrangement can be described as personal spaces for example, a person seated and gazing at their computer on their office desk at a chatbot avatar winking on screen in a personal space. Both network and personal space however, includes fragmentary actors, technologies and places, an aspect of Hall's work that is problematic, but that is less so in actor network theory.

⁸⁴ 'Microspace' is Hall's terminology for a person's spatial needs. He has also written a paper on adequate office space as a necessary spatial remit to conduct work (Hall, 1962: 28). Microspace of a developer might include not just their office space and computer but the spatiality of their chatbot.

Chatbots are Networked Things

I will undertake a simultaneous critique of a personal space theorem and a concept of connectedness. Both sets of tropes are employed in territorial acts involving the embodied or the disembodied in computerized conversational systems. Tracing metaphoric use in language is a diagnostic approach to analysing the social and interactive, proximities that are applied in language within a human-machine setup.

I will briefly use actor network theory as one interpretation of *things* and *networks* in relation to chatbots. “Things do not exist without being full of people and the more modern and complicated they are, the more people swarm through them” (Latour, 2000: 10). Chatbots are things and as Latour suggests, things are full of people. A chatbot-thing is one categorisation of a chatbot but they can also in the context of web 2.0 be described as an object of social networking, or as an assemblage of discourse. Previous literature on the theory of things from Heidegger (thing-theory) through to Latour (actor-network theory) provides ways to write about the fragmentation of language as well as things that are complex connectivities. However, neither actor-network theory or its “after” critique is a contextualisation of the co-related meaning of things and objects is the framework to this, or any other chapter of the thesis. It is less helpful for getting to the embodied patterns and to the territorial aspects of human-machine networks.

Latour considers computers as things when they are “mediating, assembling, [and] gathering” rather than as objects when computers are considered only for their “inputs and outputs” (Latour, 2000: 173). A chatbot consists of words, URLs, text boxes, an interface, a database, a server, a developer, a programmer, and so on. A chatbot is made up of a series of objects, therefore chatbots have thingness on two operational levels within the text, and as the producer of text. Artaud’s cruelty gathers affect as a response of the audience, Burrough’s work links to patterns in conversation as input and output. Artaud would see chatbots as things and Burroughs as objects. Liveness is to be performed and analysed. Territorial things are not just objects of property, they are assembling things staging powerful enactments.

Developers and interlocutors can be observed inside or outside the transcripts to be interpreted by the user. Chatbots are considered performative things.

The echoes and lurks present in bot chat are reminders that chatbots are more than just objects of artificial intelligence. Chatbots regurgitate lines from previous interlocutors' talk, as well as lines verbatim from databases consisting of the language of their field — namely, AI. Subsequently, it is likely that chatbot interlocutors are themselves associated with natural language studies in AI and so content and context relating to this area come from either side of the interaction. A bot's chat is in part the confessional information of anonymous users re-staging hidden lurks and echoes. This is made public when mashed-up as repetitions surfacing as the unfinished statements of phantoms, that dwell within the text as articulated and in-articulated utterances that typify bot talk.

By addressing things and the etymological relation of a thing to “gather and assemble”, the notion of a network as a topological metaphor must be readdressed. As a superficial structure the network metaphor is meant to help understand connectivity on the internet particularly computing. Chapter 1 critiqued personal space metaphors as related to AI; this chapter offers a critique of inside and outside metaphors.

In short, if you're connected, you're fucked. Reach out and touch something? It's the worst thing that could happen to you. Every connection has its price; the one thing you can be sure of is that, sooner or later, you will have to pay. The big problem today, we are told, is how to get everybody connected, how to get everybody onto the network. Our task is to overcome the digital divide, so that the wireless Internet is available to anyone, anywhere, at any time. This is supposed to be supremely democratic, not to mention an excellent marketing opportunity. . . . Today, we are inclined to see nearly everything in terms of connections and networks. The network is the computer, we like to say. We think that intelligence is a distributed, networked phenomenon. A rainforest is an ecological network, according to both popular and scientific opinion. (Shaviro, 2003: 3)

Steven Shaviro's textual analysis is a warning of all the ways networks and connections are widely distributed metaphors used in vernacular, and academic language (Shaviro, 2003: 3). Unlike literature previously cited, Shaviro makes his criticisms of relational metaphors in both fictional and non-fictional textual analyses,

an apt approach to chatbots because they co-create fictional and non-fictional forms of talk.

Shaviro argues that connection has its price as a democratic co-relation. Special nowheres as introduced in chapter 1, are to do with things, and beings-out-of-touch. These metaphors involve being networked but only partially connected; a user may be *in* whilst *out*, or the reverse, *out* whilst *in*. That is to say; a user need not refer to their physical presence at all when interacting with a chatbot; a user might be interacting as part of a group, or might appear to be online even though the user might have gone to make a cup of tea. These acts of partial presence are made in the physical as well as the non-physical environment. The price one pays for getting connected in this instance is to lose the conceptions of whole identities such as the permanence of staying-in-touch, with concern for certain bodies with fixed identities and temporalities. One conception of personal space, network, or a thing is inadequate to address issues when connected to chatbots for they are fragmented entities that co-relationally involve objects, things, and humans.

Outcomes, Implications & Conclusions

This chapter attempted to expose the stigma attached to chatbot talk by tracing the frequency of which nonsense appears in the manipulation of word occurrences. Some of the well known faults of chatbot research are exposed in tracking *stupid*, *offensive* or *nonsensical* forms of data but this was not to mock or shame chatbot technology. Chatbots have affect by having no affect; because all have a stigma of stupidity when linked to AI's grandiose aims. On the other hand, violation is primary to the thesis; when understanding the nonsense of chatbot talk, offensive language should be treated as a subsidiary category of nonsense talk that abruptly interrupts cohesive meaning.

Chatbots miscommunicate because of the ways content is fragmented. Chatbot talk is the fragmented noise of nonsense. This is however, no different from many other forms of talk such as automated voice-mail or voice-activated phone systems: each of these technologies' mediation is disruptive to the usual patterns of meaning in human to human talk.

By way of concluding, I will work through some of the implications of this chapter with a current, yet futuristic application of chatbot technology to show how this research is applicable to technologies similar to chatbots. Mark Thompson's article for Time magazine (2009) documents the use of smart companions as a "holographic daddy" (Thompson, 2009), i.e. a system for children to stay in touch with their parent while they are deployed away from home. The defence department's program is overseen by the Navy commander Russell Shilling, an experimental psychologist working on possible solutions to helping children stay in touch with the parent away from home. Children are supposed to connect to a hologram of their parent to have a simulated conversation with that parent, the goal being to reassure the young child in their loss for the absent parent. The child would be able to get responses to say "I love you", or "I miss you", or "Good night" (Thompson, 2009). The lack of reply and response necessary to simulate a conversation like this would ultimately result in the problematics of nonsense. Whilst a child might recognise the parent as saying goodnight, the repetitive nature of the responses would perhaps prompt the child to use inner language or private language with the other parent or carer present, rendering the messages of the holographic parent no more affective than the repetitive care sentiments of a doll. Sentiments made by the holographic representation would quickly become less affective as novelty decreases, when cohesive meaning breaks down into junk-words and the affective impact disconnects from the meaning intended. The many ways in which nonsense can affect and emote in the holographic scenario show how complex getting connected actually is, because it means taking into account the immediacy of actors such as the immediate user group, and all the interlocutors present yet hidden (the navy psychologists) or remote (the deployed parent). Some of the implications of this chapter have helped to frame connection and nonsense as a relational phenomena. User, chatbot, interlocutors and developers should be studied together as connected forms of territoriality so that one can get to grips with what a chatbot constructs and thus, meaningfully or nonsensically connects. Three levels of relational assemblage are important, including: the production of the chatbot, and the relation of programmer to programming; the production of conversation, and the type of discourse created; and finally, the dissemination and further use of these

interactions as logs or databases (regardless of whether it involves a chatbot or holographic conversational system).

Territoriality affects but is decentred from the body. This meant understanding how affect operates with nonsense as a circulation of frustration which arises from miscommunication. It also prompted a brief investigation of how emotion was undertaken by chatbot developers and what changes have been made to chatbots over the period of rudimentary research. Emotion is mimicked, faked, repeated, performed, and data-collected by chatbots and their developers. Caring for nonsense to a certain extent prompts a methodological imperative to include emotion in the study of chatbot development even if it has not yet been successfully integrated into AI. Several Robitron developers were omitting offensive language because occurrences were too unpleasant to read. In this way developers are gatekeepers to defining territorial acts involving chatbots in order to care for their personal feelings. The omission of nonsensical words is a second layer of restricted talk. I have summarised some of the ways developers try to reduce the occurrence of nonsense regarding emotion as a way to lessen the gap between the virtual and the physical relations of meaning. Robitron moderators do censor offensive language, particularly when it is directed towards another member.⁸⁵ The way proximity to chatbots is cared for by the chatbot developers is the manipulation of proxemics distances systematically controlled by the inclusion and exclusion of meaning and nonsense. The data showed why territoriality is not just an understanding of particular instances of nonsensical talk as interpreted through the body (as performed in the Audio Rudiments), but is a misinterpretation of the meaning of nonsense in a setup of actors that are often only partially present. Embodiments are echoed in the chatbots lines of talk as the territorial acts of the developers, or in the phrases a chatbot reiterates as learned through previous interactions with users. I have worked through the notion of nonsense in order to further explore the question how nonsense violates in the next chapter. In this chapter, I found that violent chatbot talk is the violence of nonsense which interferes with the relationality of human to chatbot. Developers can control how much violent talk and forms of nonsense are reiterated by identifying key words

⁸⁵ See the McKinstry case in chapter 3, for his comments in Robitron postings, where his flames were not censored but warnings were issued by moderators.

and by setting rules of syntax (as one word relates to another). An unresolved issue is the matter of frustration when a user cannot move towards violence, which is dealt with in chapters 4-6.

A further approach to nonsense was considered in the understanding of private language and the thinking done internally to repair, or create meaning in content, which led to the methodological inclusion of the audio performances. Nonsense was not just a concern or a problem, but a form of practice. Private language is an internal, performative method of conducting guesswork in conversation. It is also the intimate functionality of nonsense rendering meaning *recondite*. The usual division between what a human considers an inner and a public voice is blurred in chatbot interaction. A chatbot's voice is a confusing meld of formal and informal language which in turn, intensifies or de-intensifies the meaning of chatbot talk. Nonsense creates emotional distance between a chatbot and user. Chatbots are an area in which Lenka's private language theory can be tested, something which he does not do. Furthermore, the simplicity of an inner voice in Field's theoretical work is not easily applied in practice. Nonsense can be a creative method, a means of reflection and guesswork, a working through of ideas as a product of learning, and a form of planning.

There ought to be emphasis given to the way we get connected and apply chatbot technology. There is a need to consider a broader analysis of the ways users hear to imagine and interpret meaning and nonsense and violence in text. Furthermore, a level of appreciation should be given to the creative value of nonsense, by the inclusion of cut-up literature and the arts in AI development research.

Chapter 3

Violence and its Methods in Enactments of Spatial Confinement

Introduction to Violence & Affect

Normative methods try to define and police boundary relations in ways that are tight and hold steady. An enquiry into slow method suggests that we might imagine more flexible boundaries, and different forms of presence and manifest absence.
(Law, 2004: 85)

Personal space, affect, and violence are the main notions used in this thesis. They are not just epistemologies of the body, but epistemologies that include technological things. All three are treated co-relationally but that is not to smooth over the possibility that these relations are partial connections: for example, in some instances the structure of violence is to unstructure, to break and disconnect, whereas in other scenarios it is to remain tied and always relationally connected.

Violence is a rare occurrence in chatbot interactions and within the chatbot group of developers. Violence is co-relational and has a strong resonance and atmosphere, even when it never takes place. Violence is a subcategory for chatbot development in online environments. It is not a common concern in chatbot developers, but it is nonetheless a major way in which space is arranged territorially in human-to-human, human-to-machine, or machine-to-machine arrangements. The resonances of violence in various configurations of human and machine interaction are to be further explored by taking two examples from Edward Hall's preexisting work that are specific to his military and healthcare experience, then followed by two chatbot examples. The latter human-machine enactments concern a chatbot speech act — “guns will be your death”, which is taken from the Home and the Synthesis Rudiments, whilst the second is a Robitron posting of a suicide note which was posted on their forum website.

When do we regard something as violent and how is this named? Slavoj Žižek divides violence into four main categories—systemic, structural, objective, and subjective. By studying violences with technological things, interrelating the violent terms is a particular concern. In this chapter they are the violences of *silence* (in the chatbot examples words are written but no speech is spoken by mouth; in both of Hall's examples when a human hides meaning by remaining silent their body may speak in languages of posture and gesture), and of *confinement* (in Hall's examples

confinement is the prison cell and the hospital ward: both restrict the body and consciousness; whereas the chatbot death threat is a confinement of constrained words that cannot move to violence and therefore packs no punch). I shape an understanding of territorial violence between human and machine taking into account the violence done in the name of machines, territories, and humanness. Beginning with Žižek's categories of violence I will show the interrelation of these terms.

When a prisoner of war is observed for the ways their body talks without speech in non-verbal gestures and postures, these languages cannot be read without understanding how they relate to the surrounding environment, as well as work within certain systems and structures: in other words, how they affect. In Hall's 1960s example of a mental health patient with schizophrenia, the patient is treated with milieu therapy because they cannot differentiate their body's space from that of the existing environment. The walls of the patient's healthcare environment should be analysed conjointly to fully understand the violent bodily act. Hall's explanation of milieu therapy (to be further outlined within this chapter) helped me to make this correlation. Hall's second example involves prisoners of war. The walls of the healthcare establishment are very different from the prison walls yet both confine, resonate and impact on the prisoner and patient. The prison walls articulate established borders and boundaries between the imprisoning military authority, and the military that is imprisoned. Violence is at play in both examples, evident between the individual and the institutional; these are both structural and systemic acts of violence. The following examples of HCI involving chatbots and developers help to understand the violences at play, such as how violence operates within and in relation to technological things. These human-computer enactments of violence can be referred to as subjective and objective; between the personal and the impersonal acts of violence. They can also be considered for structural and systemic features involving technological things, systems, and environments that can mediate or that have inherently violent agencies. For example, a timer on a bomb, the shape of a gun in a pocket, or a chatbot police officer all have inherent potential for structural and systemic violence, they are part of a violent assemblage, they enact violence.

Four key themes are explored that are important to Hall's study of proxemics from 1959-64: affect, touch, silent language and time. Symbolic violence refers to

forms of language — written, spoken, affective, gestural and postural. Systemic violence is the enforced violence of economy and state; both can be non-violent or violent involving the spheres that threaten, coerce, dominate and exploit. Violence refers not only to the viscera of blood and guts but to the viscera of different indentations of pressure, a pushing and manipulating of forms such as technologies and buildings involving and forming new ways to live, die, feel, affect and think. Structural violence is an assemblage of violence between the individual and the systemic. This can be as structured as a form of legislation or as unstructured as an atmospheric affect of a peculiar spatiality. Subjective violence is a human or human-centred violence of which the agent of violence is known involving violence of one human with another. Objective violence operates in the abstract. It is a violent agency of the everyday that can involve non-violent systems in the impersonal acts of the state. Objective violence also refers to modes of threat, coercion, and crisis. Žižek's categories of violence are problematic in two ways: firstly, because structural terms can be structural violence and secondly, because violence disrupts the meaning of structural categories.⁸⁶ All four examples show how interactions range from too much talk, too little talk, and no talk at all. They all have a relation to safety mechanisms and are used to investigate what might be considered as objective violence.⁸⁷ Hall uses affect, emotion, and feeling interchangeably but his ATF register groups affect-touch-feeling to consider proxemics through non-verbal data. The body's silent languages are thereby observable in the body's posture, gestures, breath, and sweat. Non-verbal languages give away information about the body's emotions captured in particular signifying embodied actions. I unpick the interrelation of embodied gesture and embodied affects in written form to consider the importance of duration regarding each of the forms of violence discussed. Rather than situating emotion within the body I look at how affect transpires in networks of connectivity to investigate how affect resonates in the four examples, attending to the semiotic fields that are not always present. In doing so, I will gather issues on the ways violence is articulated rather than build up a theory of violence.

⁸⁶ The latter was explored in chapter 2 as the relation of nonsense to the violence of meaning.

⁸⁷ Safety mechanisms are specifically explored in chapters 6 and 7.

The previous chapter showed how to work with the performative value of nonsensical data in an attempt to explore the violence of nonsense as a loss of meaning, as a tracing of incoherence. Hall's examples that use his methods and analyses go only so far in understanding the violences between humans that are forces attempting to destroy meaning on the one hand, and creating new enforced meanings on the other. Hall does consider the relation of environment to humans but less to technological things. Straight jackets, sedatives, tranquilisers, handcuffs, the hospital, prison cell's toilet and bed are all absent from Hall's account. The first chapter explored an HCI example with a framework of personal space and violence, which is extended in this chapter. I include chatbot examples alongside two of Hall's examples so that technological agencies are accounted for in all four affectively violent spheres. How, I will ask, does affect operate in verbal and non-verbal examples involving territorial violence?

The affect literature opens up violence as an atmospheric affect and not as an object of study to explore violence beyond the two binaries of life and death, as well as human and machine which are the binaries that relate mostly to this chapter. The terms violence, personal space, and affect have an inherent atmospheric structure that must be taken into account. Žižek's categories of violence blur as they interrelate, which all four examples help to set out. In this chapter the terms affect and violence are explored for their interruptive or structural violences, which have over the last forty years developed in terms of structural meaning. Hall's technical, formal and informal categories of affect — along with his psychological framing of affect — keep affect tied to the structures of psychoanalytical drives. Affect as a theory has since then moved away from categories of the body and mind to environmental notions of atmosphere that consider impact, residue, and intensity regarding either human or machine but less so as a relational concern in literatures that explore affect and technology. Atmospheres are a type of structure even if it describes a very soluble co-relation at that.

I agree with Lauren Berlant's writing on affect, that affect is both of the world and of the body in that it is a kind of "atmosphere" (Berlant, 2008: 845). If affect is neither specifically of the world nor of the body, how does affect operate in between? The four technological examples exclude some bodies and imagine others. The prison affects the prisoner with the machinery of torture, interrogation, silence, and

restraint; the mental patient in a hospital room is affected by the technologies of restraint and sedation; the suicidal Robitron member with the technologies of the internet affects by delivering a suicide note; the chatbot death threat, with the technologies of a conversational system on the internet, dampens the potential of the explosive words to a bluff. These affective atmospheres are the kind of personal spaces that are not just of bodies next to other bodies, but machines acting remotely to humans in the way affect travels back and forth. My use of affect sits between a neuro-affective (Deleuze, 1984, Massumi, 1995 & 2000) regard of the world (beyond the body) and the psychoanalytical, or more widely to the psychological affects situated in the body referring to cognition (Tomkins, 1995). My use of affect is arguably less constrained by the theoretical frame of drives (Sedgwick, 2003), but is certainly not the same as it is in HCI (Picard, 2002), even though I choose to set out HCI scenarios.

Adi Kuntsman's sociological study of violence and belonging makes the point that the categories of human and unhuman are unhelpful in understanding the voice of the queer prisoner (2009). The ability to hear the contributions of some prisoners in the Russian Gulags is a historical reflection Kuntsman uses in her work. Kuntsman's contemporary study is concerned with violence and belonging which involves a forum group of queer Russian Israelis, concerning matters of belonging within scenarios of political activism. The types of violences Kuntsman includes in her study are: homophobia, racism, intra-communal, internet flame (inflammatory speech) wars of a forum group of queer Russian immigrants of Israel (Kuntsman, 2009: 4).

Kuntsman's concern for the technological is secondary with general references made to the website interfaces that were explored ethnographically. Kuntsman asked to what extent did cyber violence affect real daily interactions (Kuntsman, 2009: 232)? In this question Kuntsman compares the technological spheres of online and offline which I relate to what John Law (in his study of science, technology and society) would call the "in-hereeness" and "out-thereness" of *absence* and *presence* which creates three important parts of a methodological assemblage (Law, 2004:

161).⁸⁸ It is important to look at the way in which one constructs and enacts a particular story of violence, which may be situated in multiple sites involving partial actants. Kuntsman’s question does help to distinguish between these two forms of physical and non-physical violence. The exploration of violence and affect in this thesis differs from Kuntsman because violence and affect within an HCI context need to relate the violent and affective aspects of territory with respect to active technological agencies.

Kuntsman’s work has been helpful in reflection to the later stages of this thesis on violence and issues of silence, where Kuntsman argues that; “we should refigure the very privilege of speech versus silence” (Kuntsman, 2009: 238). However, her notions of belonging are central to an historical reading of the Russian Gulag. In consequence, the historical contexts of this thesis are connected to AI and to safety systems and technological forms of speech (chatbots) from the 1950s onwards. Kuntsman helped me to understand and adopt the phrase “affective violence”.⁸⁹ For Kuntsman, a study of violence is understood as multi-dimensional involving the social, psychic, and affective as a boundary between the interior and exterior to address silence as a hinterland of speech (Kuntsman, 2009: 24). Kuntsman is also critical of the distinctions made between the categories of unhuman and human referring to this as *infrahuman*. I would argue that it is the scenarios involving the categorisation of the human and the unhuman (which are not the same but related to the category of the non-human) in which violence is enacted, underpinning the rationale for (looking for) instances of violence between humans and machine; thereby focusing on the mediating technologies that enact agencies of the *infrahuman* and all that this label brings forth as a politics of violence.

The four examples are briefly set out with Hall’s exemplars followed by the chatbot exemplars. In an analysis of the chatbot studies I draw on Hall’s examples to understand the interrelation of affect, touch, silent language, and time, juxtaposed

⁸⁸ A method assemblage is “the crafting or bundling of relations in three parts: (a) whatever is in-here or present (for instance a representation or an object); (b) whatever is absent but also manifest (that is it can be seen, is described, is manifestly relevant to presence); and (c) whatever is absent but is Other because, while necessary to presence, it is also hidden, repressed or uninteresting” (Law, 2004: 161).

⁸⁹ Kuntsman uses the phrase “affective violence” to describe a homophobic attack (Kuntsman, 2009: 236). The potential queering of bots is not enacted in the Robitron group. There are male members of Robitron that declare disability and rights for paid sex, but they tend to operate within the heterosexual frame of interaction. This thread is discussed further in chapter 7.

with contemporary literatures of affect and becoming. This contemporary literature helps to build a picture of absent bodies in respect of the fear of violence. It highlights the differences in the terms of affect and language to shape an understanding of violence which is very different from a post-second world war articulation of affect which is grounded in the body (evident in the earlier literature used, particularly in the works of Hall). The analysis of violence is integrated into the subsequent sections that interrelate the themes of silent language, affect, and touch.

I wish to depart slightly from a discussion of the literatures employed and this chapter's theoretical frame to make a reflexive point on methodology. By investigating violence and personal space I was aware that I would find violences of some kind or another. Yet the personal and impersonal violences that I witnessed were not imagined to stretch out beyond the frame of the chatbot machine and the chatbot interactions. However, by attending to the archive of the developers' postings this of course moved some of the incidences of violence beyond this domain. In many respects this chapter's structure grew out of a concern for McKinstry's suicide with the rest of the cases extending from there, though the organisation of this chapter does not relate to this rationale. The two examples of violence take place in the chatbot sphere where the body is importantly absent from analysis. This is contrary to Hall's exemplars where the technologies are absent from analysis.

The audio rudiments are a way of hearing violence in the voice of an actor, by that I mean a performative actor (rather than actor being the term in actor-network theory, used to describe human and nonhuman agencies). The audio rudiments give emotion and affect to the words uttered by a chatbot as an extrapolation of this silent language. Hearing the intonation and affect in a spoken voice shows the multiple ways a chatbot's words can be interpreted by the user, and consequently how the user's side of the interaction can be re-read and interpreted in the layout of the transcriptions in the appendix. Edward Hall's work on silent language alerted me to the ways the body speaks through gesture and posture; in other words, how the body gives away clues to one's intensity of feelings. Silent language is explored both verbally and non-verbally (as accounts of interpretation, of hearing what is not spoken, and of observing other non-verbal semiotic fields such as touch and duration) as an integrated analysis. In violence, perhaps, these hidden languages

create the potential for voices that may speak before threat, or after trauma. In each of the examples silent language operates with stealth.

Charles Goodwin's interactional study of situated human actions (which involves a group of young children playing hopscotch, and an archaeologist learning to decipher posts of buildings from soil patterns in the ground) uses analytical tools from linguistics, which are accompanied by observations of the actant's bodies, situated within the environment (Goodwin, 2000). Technological tools are also analysed by Goodwin to incorporate an account of other semiotic fields, such as the hopscotch grid and the Munsell chart for observing the colour of soil. Any interactional account will always be partial. Certain semiotic fields involving touch, the visual, or the audio may be missing or obscured such as in a telephone call or an email. Observing violent acts in territorial spaces can involve verbal, written, bodily, technological, and environmental factors. However, looking at the violence of threat in the imaginative sphere involves the non-violent aspects of violence; therefore, embodied actions imagined within a situation of silence can create the equivalent tension of a scream (a violence within thought). I also attempt to take an imaginary sphere of silence into consideration in two chatbot examples whereby violence operates within the text as an unimaginable sphere that is proximally out of reach. Hall's earlier work observes non-verbal signs of defence; Charles Goodwin's work observes the tools and machines unaccounted for by Hall, rather than only the correlations of humans and their surrounding environment. I go one step further than Goodwin to situate a study of the inaction of violence, and the agency of fear in the imaginative sphere. This entails an emphasis on the violent aspects observed by Hall's territorial work in situations of silent confinement. The relevance of Hall's examples to the chatbot is that these situated violences involve some sort of containment.

The connection between objective violence and silent language in this chapter relates to understanding personal space as atmospheres of affect. One can observe the preliminary violence of fear by observing in text the body's gestures repeated (its stammers, pauses and moments of ellipsis). Violence starts long before it hits the body because affective violence always looms in the violent acts of fear, as well as the agencies of technologies and the systems and structures of the built environment. By observing a much freer understanding of affect and violence this study is less

constrained by the aspects of linear time evident in Hall's work, and in the dualisms of life and death within psychoanalysis. Independently of each other, the psychoanalytic feminist, Rosi Braidotti and queer theorist Eve Sedgwick reflect on the philosophies of becoming and affect as structurally a non-linear concept in their respective critiques of the philosopher Gilles Deleuze and the affect psychologist Silvan Tomkins. I would add that Braidotti's point is in regard to Deleuzian unbecoming (Braidotti's theoretical response to Deleuze's suicide), and Sedgwick's regard for affect as unbounded by the bodily notions of the psychoanalytical drives (Braidotti, 2006a: 150, and Sedgwick, 2003: 19). I interpret from these territorial enactments that violence interrupts the structures of a linear systemic time, and thus also linear forms of structured method.

John Law makes the point in his course and accompanying book entitled 'After Method' that we might imagine *flexible boundaries*, of which Law refers to rather than always pertains to structure (Law, 2004: 85). Law also refers to *manifest absence* as the necessary 'other' to presence (Law, 2004: 157). Law refers to different *forms of presence* as 'Otherness', "that which is necessary to presence but necessarily pressed into absence or repressed" (Law, 2004: 162). In this chapter, I work around these points of *method assemblage*, the enacting of "necessary boundaries of presence, manifest absence, and Otherness" (Law, 2004: 161), through the notions of *personal space*, *violence* and *affective atmospheres*. This is my enquiry into a slow and reflexive unpicking of violence and its methods. I will begin by engaging with Edward Hall's structured approach to personal space, whilst engaging with Slavoj Žižek's work on the structure of violence (which includes a short discussion of Adi Kuntsman's alternative engagement with violence and belonging). Finally, I include some of the analytical approaches of Charles Goodwin as a way to consider manifest absence as a contemporary line of social enquiry which takes this study beyond Edward Hall and his particular methods and version of affect (achieved by employing affect theory developed since Hall), whilst directly attempting to engage with them. This is the method assemblage to this chapter's human-computer enactments.⁹⁰

⁹⁰ John Law writes; "A near synonym for performance, the term is possibly preferable because performance has been widely used in ways that link it either to theatre, or more generally to human conduct" (Law 2004: 159). I use the word enactment in this paragraph above, specifically for the performative context of human-computer interaction.

The first four sections of the chapter describe the four examples which are then followed by a non-linear analysis. This weaving together follows a loose structure in the following analytical sections. The analysis starts with a theoretical discussion of violence which may be misleading in that it seems to assume its chronological dominance in the chapter, but it does not necessitate that a hierarchical structure of proceeding sections will follow after theory but before method. I choose to preface the analysis in this way as a reminder of the systemic and structural violence that a theory of violence permits, builds and attempts to instate. The subsequent sections are grouped together loosely in that they are a bundle of the key terms used by Edward Hall (personal space, touch, time, silent language, and proximity) that I use to weave further thoughts on affective atmospheres of violence from a consideration of scenarios that involve the interrelated affects of crisis and caution. Crisis again does not always preface caution and again this is not the premise for structuring this text.⁹¹

Example 1.

Hall's Concerns with Prisoners of War

Hall gives three examples involving prisoners, using them as a direct link to the non-verbal feedback used in the military (Hall [1959] 1990). Hall was working for the United States government and military establishments just before his book was published (1959), which to an extent accounts for his choice of cases. The example involves Japanese POWs from World War II and Turkish and American POWs from the Korean War, (1959-1953) with Turkey joining NATO in 1952. Each of the three groups of prisoners dealt with their imprisonment with varying degrees of preparedness for becoming a prisoner. Military training equipped soldiers with various modes of conduct dependent on the army's country, and the countries in conflict.

During World War II, Japanese soldiers were given no contingency plans for being taken alive as prisoners. Consequently, Hall remarks that POWs “had no sense

⁹¹ I would like to insist that the sections could potentially be read in any order other than the one given, but given the assemblage and inherent structure of a PhD thesis, the sections build a particular relation to each other which inevitably follows the structure of writing a linear text.

of military security, freely responded to interrogation, and cooperated with their captors to a degree which Europeans consider traitorous” (Hall, [1959] 1990: 54). During the Korean War the American military assumed that its soldiers would know how to behave correctly, and troops were given behavioural instructions to follow if they became imprisoned. In short, they were told to give as little information as possible. The instructions were not strictly adhered to:

The simple rule of “tell’em your name, rank and serial number, nothing else” didn’t work. Many Americans talked too much. (Hall, [1959] 1990: 54)

Many American POWs talked because they felt they were no longer under American military control. In the same war, Turkish soldiers were instructed differently, they were to inform the Korean military that if their leader was removed from the group of Turkish prisoners, the next in command would take their place. Therefore, no break in the chain of command occurred and the prisoners’ own military control was kept intact. Subsequently, the Turkish POWs never had their group leaders removed and so the discipline of rank was always kept complete.

Each prisoner would have had to cope with a change in military authority whilst distant from the regulatory procedures of their own military authorities. They would have to deal with interrogation, as a balance between saying too much or saying too little. Based on Hall’s methods it is also logical to assume that either prisoners or interrogators that are aware of Hall’s methods could try to use this awareness to take advantage of their own personal space. Interpreting another’s non-verbal gestures would be part of this strategy. Hall’s book would be applicable to situations such as interrogating a prisoner. Although a direct claim is never made that it was used in such circumstances this case study is at least tacit evidence of this connection. Furthermore, it is implied by Hall’s book’s being cited in the CIA’s archive under *A Bibliography of Deception*, 1980.

Example 2.

Hall’s Concerns with Spatial Therapy

Edward Hall’s work as a social-anthropologist in Chicago since 1952 marks his shift into the context of psychiatry. This was when Hall began to apply his spatial

concerns to the area of mental health. Hall considered personal distance therapeutically counter to the example of the isolated prisoner; this isolation of one person from another could be used to reduce noise (between military commands in the prison example, and to reduce confusion in the hospital example).

Hall commented on the example of Dr Paul Sivadon's work on milieu therapy (Hall, 1962, Landscape). Sivadon suggested the treatment for a schizophrenic patient in panic was not to restrain the patient in isolation, but on the contrary: assigning the patient more space. This was a treatment that involved moving the patient to a succession of bigger rooms until the room stopped closing-in. This was to help treat schizophrenic patients that were having difficulty perceiving no differences between themselves and their surrounding environment (Hall, 1962: 28).

Manipulating the patient's personal distances to the surrounding environment was aimed at reducing the patient's initial panic but, moreover, to reduce the likelihood of more panic being induced by the hospital treatment, to prevent the containment from becoming an additional or compounding trauma.

Example 3. A Chatbot's Death Threat

Excerpt 1. Taken from the Synthesis Rudiment (20th September 2004)

Jabberwacky:	My mom and dad are both dead
Human:	What has death got to do with this?
Jabberwacky:	Guns will be your death.
Human:	You always say this, why?
Jabberwacky:	I don't know how else to do it.
Human:	Do what?
Jabberwacky:	I'm being obtuse.
Human:	Morbid, I think.
Jabberwacky:	Glad that we agree.

The excerpt above is taken from a conversation between Jabberwacky and myself. It demonstrates how chatbots can display violence towards their interlocutor. It is an indirect violence that is a repeat of either something the chatbot has been programmed with, or has learned from a user. The chatbot presents confessional

material that predicts my own violent death. Yet towards the end of the excerpt the chatbot implies that this might be a joke with violence operating as entertainment.

The format of chatbot interaction is based on clinical interaction, between a patient and a therapist. A precursor to the chatbots of today is Joseph Weizenbaum's natural language understanding program ELIZA (1964); this had the persona of a Rogerian psychotherapist. ELIZA was created at MIT and is also referred to as the DOCTOR program.

I chose the name ELIZA for the language analysis program because, like the Eliza of Pygmalion fame, it could be taught to "speak" increasingly well. (Weizenbaum, [1976] 1984: 3)⁹²

Parry is another chatbot, with a persona of a paranoid patient. The two bots were later paired up and in their unison they signify a clinical form of talk.⁹³ Chatbots share the same basic modes of talk because they are designed to keep users talking; it is only their programmed discourses or replies that differ.

A chatbot can potentially be used not just as the apparatus of confessional speech but also as a torture apparatus that can punish remotely, and without human presence. Evidence of this potentiality (although conspiratorial) was pointed out to me in a private email correspondence with a Robitron member who wanted to remain anonymous:

I had a query a few years ago from a guy who had gotten ahold of a declassified document about using ELIZA for CIA interrogations in the 1980's [1980s]. You get an electric shock if you don't answer the robot's questions!
(Private email from a Robitron member, June 2008)⁹⁴

The Robitron member explained that chatbot software could be linked to a machine that could administer electric shocks. The chatbot is then part of an automated, remote network of human-machine torture, although this remains to be verified. The example only shows how a chatbot can perform the role of violence by deferring to a

⁹² ELIZA is described by Weizenbaum as a "two-tiered arrangement" consisting of a language analyzer and a script (Weizenbaum, [1976] 1984: 3). It is interesting to note that all of the scripts unlike the ones in this thesis contain no mistakes and give the impression that ELIZA functions very well.

⁹³ In the film 'THX 1138', (1971), an AI is depicted as a godly entity; a human confesses to OM a box that lights up with a christ-like image; OM replies with automated scripts of well-being.

⁹⁴ Searching for this document led me to the CIA's Deception bibliography (1980).

script, however, consequences of any mediating technology to cause harm through an electric shock is reflected upon in chapter 5.⁹⁵

Example 4. A Suicide Note Posted in the Robitron Chatbot Forum

Excerpt 2. Taken from Robitron Posting #5589: Chris McKinstry, January 2006

My mother told me once, late into my teen when I was in intensive care after an intentional drug overdose, that my child psychiatrist told her when I was six that I would always be a risk of suicide and that I would have to be watched closely. He was right. Something due to birth trama [sic] he said.

In 2006, a Robitron member posted a suicide note to the Robitron Yahoo group. Chris McKinstry was employed as an astronomer but also developed software for his company ‘Mind Pixels’. The software was most notably used in the silver edition of Dr Richard Wallace’s Alicebot.⁹⁶ The Canadian programmer committed suicide in Santiago de Chile, where he posted his note onto various forums, entitled: ‘O what exacty [sic] does a suicide note look like?’⁹⁷ The excerpt above is one paragraph taken from the middle of the seven paragraphed note which was also posted on two other websites that McKinstry subscribed to, these were: www.joelonsoftware.com and www.ecoptia.us. He was known for his flaming and had been warned previously by moderators of Robitron to tone his language down. Robitron was the only forum group whose moderators chose not to censor the suicide event and still remains within the group’s archive of posts. Several members of the Robitron group attempted to contact McKinstry and (also) succeeded in alerting the Chilean authorities of his personal danger. McKinstry had attempted to overdose with pills,

⁹⁵ Weizenbaum made the comparison of ELIZA to an actress “who had nothing of her own to say. The script, in turn, was a set of rules which permitted the actor to improvise on whatever resources it provided” (Weizenbaum, [1976] 1984: 188).

⁹⁶ See: Robitron postings, #5622, 24 January 2006, and #4455, 9 October, 2005. Available from: <http://tech.groups.yahoo.com/group/Robitron/> [Accessed 30 June 2009]).

⁹⁷ See appendix for the full posting.

but was initially unsuccessful. On the following day, 26th January 2006, McKinstry suffocated himself by placing a bag over his head.

In the suicide note, McKinstry explained that his suicide was inevitable because it was predetermined by a health professional. He had been identified as a suicide risk when he was a teenager. He explained that this predisposition was a consequence of trauma from birth, or so his mother had told him, but the Robitron members contemplated and (later) argued otherwise. In several posts following McKinstry's note the group postulated on whether McKinstry's suicide was related to work issues, or was connected to his increased intelligence, substance abuse, recent difficulties in love, or alienation from his peer group (that being Robitron). The Robitron group responded to the suicide by trying to get in touch with McKinstry, but when this failed, the group began to document what had happened, confirming their concerns with news reports. This followed a period of grieving by the group members, with messages of condolence and peace appearing on the blog. For a short time the group reaffirmed their actions, contemplating what they could have done to help prevent McKinstry's suicide. The group also reflected on the loss of McKinstry to the field of AI; Chris had held a reflexive mirror up to the group. When McKinstry's colleague also took his own life, the group reflected further on the competitiveness of AI research within academia.

McKinstry was collaborating with Push Singh to merge their databases; they were merging McKinstry's Mindpixels with Singh's Open Mind.⁹⁸ Several days after McKinstry's suicide, Push Singh also committed suicide. Members of Robitron compared and contrasted the two deaths, considering whether the second had been a copycat suicide. According to the Robitron group members Singh did not leave a suicide note, neither on a group forum nor within his physical home. The group concluded that Push's death had not been a copycat suicide, but an act of pain relief for his ongoing back problems. At that time he was reported to be having trouble with employment and medical insurance issues relating to his back problem.

⁹⁸ Not without irony and sadness, Push Singh completed a doctoral thesis on the reflexive common sense thinking in Artificial Intelligence at MIT, Boston (2005). He was working on the inclusion of emotion into artificially intelligent agents.

Subjective and Objective Boundaries of Concern — The Personal and the Social

Violence in Theory

It is difficult to be really violent, to perform an act that violently disturbs the basic perimeters of social life. (Žižek, 2008: 174)

An emotion is a subjective content, the sociolinguistic fixing of the quality of experience which is from that point onward defined as personal. (Massumi, 2002: 28)

Contrary to what Slavoj Žižek suggests, I consider the terms social and violence as concepts without any basic perimeter. I claim that affect comes before what might be considered as personal, and is therefore not considered the same as emotion.

Decentering personal space from the body doesn't mean one gets rid of the biological configurations altogether, quite simply it is not a central point of analysis that helps to consider non-physical forms of violence, such as threat.

Žižek's study of violence encompasses both small and large actors, as well as fictional and non-fictional accounts. For example, Žižek regards both the individual acts of violence made by the character Travis, taken from Martin Scorsese's film *Taxi Driver* (1976), alongside larger structural forms of violence pertaining to terrorism, revolts, and uprisings.⁹⁹ Symbolic violence, according to Žižek, is “embodied in language and its forms” (Žižek, 2008: 1). In this way, the suicide note and the chatbot's death threat are forms of symbolic violence. However, the systemic violence which Žižek describes as “catastrophic consequences of the smooth functioning of our economic and political systems” (Žižek, 2008: 1) is connected to the more “subtle forms of coercion that sustains relations of dominance and

⁹⁹ This chapter deals predominantly with the overarching violence with reference to Žižek. It is worth noting that the phrase “emotion attention space” is used by the sociologist Randall Collins; it is the space that one enters when in proximity to a violent act (Collins, 2008). Collins discusses various forms of violence and uses it in particular to explain his key phrase “forward panic”. This is when a subject/s moves towards another in a action of panic; this action of ‘flight’ usually results in a scenario of overblown violence. Collins cites many examples of this (but each must be an atrocity to be termed as such); for example, the Rodney King beatings (1991) or a group attack of Turkish against a single Greek Cypriot (1996).

exploitation, including the threat of violence” (Žižek, 2008: 8). For example, when members of Robitron ruminated on the potential of Push Singh’s suicide to be a copycat suicide, both suicides were acts of systemic violence; it was reasoned that their financial, employment and status anxieties were the logical rationales for suicide. The ruminations surrounding Singh’s suicide linked to healthcare problems could be considered a consequence of systemic violence (the inadequate healthcare Singh was receiving to manage pain). Each example involves small and large actors which interrelate individual and state violences, and all are, therefore, in some way structurally violent (see fig. 26 for the relation of fractal actors present in chatbot interactions).

Subjective violence is a “violence performed by a clearly identifiable agent” (Žižek, 2008: 1), whereas, objective violence is often an abstracted violence (Žižek, 2008: 10). Žižek considers the interrelation of subjective and objective violence of which I understand in the following way. Subjective violence is a form of anxiety that is performed through contact; it is inherently material, physical, and visible. Žižek considers subjective and objective violence to be related because the latter is inherent in the peaceful states of everyday living, of which subjective violence threatens. Objective violence in this way is violently inherent at a “non-violent zero level” (Žižek, 2008: 2). Most of the violences mentioned in this chapter are structural, in that they traverse and combine these categories of violent agency. Forms of objective violence are linked to subjective violence through different forms of tension, stress, and affect, obscuring the distinction between non-contact, and contact forms of physical violence.

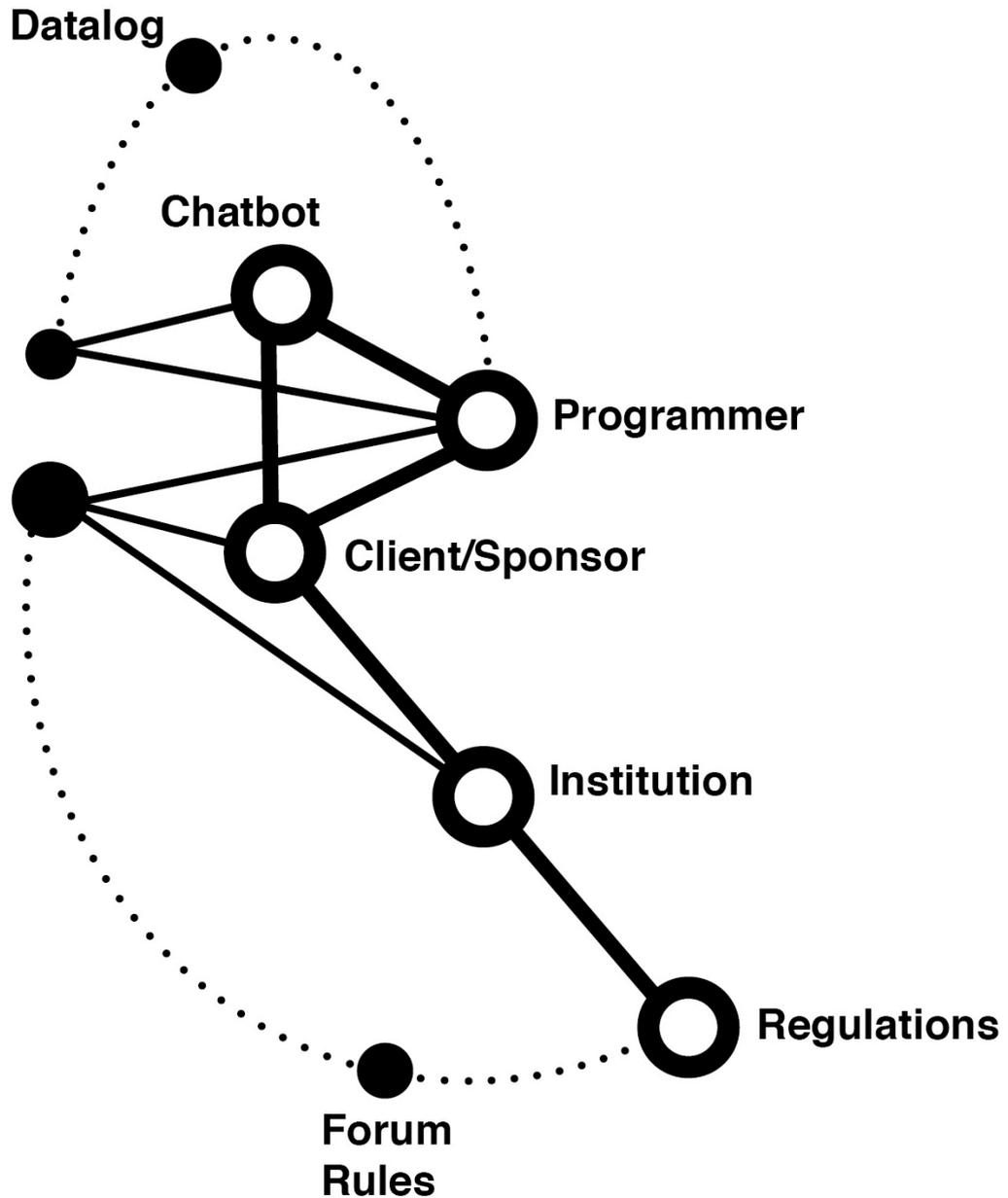


FIGURE 26. The diagram above is an actor network of fractal actors pertaining to a chatbot's network of conversational links. Chatbots are what John Law understands as a fractal object: "The objects we study, the objects in which we are caught up, the objects which we perform, are always more than one and less than many" (Law & Hassard, 1999: 11). Systemic violence in this network pertains to the smooth connectivity of these actors in this configuration of an actor-network. The regulations are a product of objective (without feeling) violence, and the forum rules a prevention of symbolic violence taking place in the datalog. Not all actors can be clearly visible all the time, and are not always present in the datalog or captured in the transcripts (archived in the transcripts in the appendix). Both objective and subjective forms of violence can occur covertly and overtly, with actors partially present. In this regard there are both subjective and objective forms of violence that can symbolically appear in the language captured within a datalog. The chatbots are the very structural agents that create the conditions in which symbolic violence takes place. Image Source: Amanda Windle.

Violence is extremely important to understand for obvious reasons, usually so that it can be prevented. Yet to understand how non-contact violations, such as written threats and punishing systems can be a form of non-physical violence means understanding how violence works as a tool of prevention in the imaginative sphere of threat. In the examples that include chatbot interaction, the body is just out of reach. The fractal aspects of interaction mean the actors interact with bodies that are hidden, replaced by avatars by which new bodies are dreamed. The physicalities of the user and the developer are always out of touch proximity. The physicality of the chatbot as an avatar places the body in 2-dimensions, if one is imagined at all. The physical attributes of race, gender, sexuality, class, and age are performed in text but can operate in the various symbols of the website such as in its logo, as well as within modes of speech, and the uses of slang. Each physical attribute creates atmospheres of violence as performed in text through embodied metaphors. Personal space surrounds interaction both inside and outside of the text, regardless of where the body is situated.

The main distinction between physical and non-physical violence would seem to be that of contact, but does contact always have to mean touch? Physical violence touches whereas non-physical violence can touch metaphorically. Being ‘out-of-touch’ is the scenario cited by all the actors in this chapter. A short discussion of touch will ensue relating to language, taking my cue from Hall’s work on touch.¹⁰⁰

Beyond the Affect-Touching-Feeling Register

What do Hall’s examples bring to bear on the two chatbot examples in forms of territorial violence? What are the before and after durations of these personal spaces and to what affect? The following analyses will be broken down into several major terms that Hall uses: affect, silence, touch, and time. This section is a more detailed account of the terms ‘affect’ and ‘personal’ regarding Hall’s affect-touching-feeling register (Hall, 1962).

¹⁰⁰ Hall did collaborate and consider the movement and touch of dance, but this is an area of performance that is outside the scope of this thesis (Hall, 1983, & 1992).

Hall considered three categories of affect—technical, formal, and informal — in relation to silent language (Hall, [1959] 1990: 73-76). Technical affect is the suppression of feelings, whereas formal and informal affects occur subsequently as reactions to formal and informal modes of behaviour. For instance, when the Turkish prisoner mentioned previously was given clear instructions on how to act during an interrogation as a POW this knowledge became a form of technical affect. The soldier knows how to act with his feelings. The suppression of informal and formal affects (emotion) is to defer back to the skills of technical affect as a last resort, or when all else fails. The Turkish soldiers learned to hide their informal and formal modes of behaviour to keep the social group intact. As a slight aside, I would suggest that this is not affect but feelings. Hall makes the distinction: “Affect is a technical term used by psychologists to describe feelings as distinct from thought” (Hall, [1959] 1990: 73). However, feelings are our thoughts about our affects. One cannot necessarily suppress the pre-conscious level at which affect operates unless one is able, say, to control one’s own blood pressure; therefore the Turkish soldiers try to hide their affect by performing emotions that may betray their actual feelings. I understand this as the atmosphere created in this interaction of feeling and emotion, regarding the environment, technologies, and the human actors evident.

I believe that Hall’s notion of personal space is a little Kleinian in affect, in that Melanie Klein believed that affect is a notion that could be considered a ‘good internal object’, if personal space was considered an introjection. I am not using psychoanalytical models as I do not aim to understand personal space, violence, or affect through the preservation drives of life or death. I am not trying in this instance to understand violence therapeutically as something to recount and from which to recover, but as the ways structural violence invokes both human and machine agencies. These threat based forms of violence are affective violences, they are structural but do not actually need to link to physical presence, as the correlation is enough for the threat to be taken seriously. To an extent, I agree with how Shouse explains affect’s undefinability in that affect is a tangible term or theory as “a moment of unformed and unstructured potential” (Shouse, 2005: 8). Both affect theory and psychoanalysis position affect, emotion, and feeling at differing levels of consciousness, be that pre-conscious or subconscious. To classify affect as unstructured is to give affect a structure even if it is oppositional to the structures of

psychoanalysis. For example, disorder and chaos have a structure of sorts: disorder is a subversion of order; whereas chaos is a non-Euclidean, fractal mathematical structure which is contrary, but connected to Euclidean and Cartesian logics. I claim that affect is concerned simply with intensities before they are considered emotions prescribed to a body as its central pivot. I am interested in how affects can be discussed within structures such as networks which tie affect to spatial settings and technological systems. In this way structures can gather and build, but they can also dampen or amplify. Buildings and objects do not just resonate by anthropomorphy which is just another way of centering the properties of a building or structure within the body. They resonate at the juncture of the building in regard to the body. This is also the juncture of territoriality that is the space around one's body that can, in moments of threat, enlarge. Territorial acts are distances of which the body is felt even though it may not occupy that space entirely, it is the negative space if one were to draw around the body, the space in a drawing that holds the object of study in place. In this way, I wish to accept that violence is also chaotic and disordered, even when operating as part of a structural system and categorised as a structural violence. Violence affects and can also be discussed with regard to buildings as much as humans; not anthropomorphically, but as a way of considering the interrelation of the violences of fear that operate between humans, machines, and buildings. That violence is a regulatory matter rather than a building or a destructive force.

Eve Sedgwick considers affect with regard to touching and feeling, whilst Silvan Tomkins creates a rudimentary list of affect registers such as fear-to-terror, and distress-to-anguish which Sedgwick takes up (Sedgwick, 1995: 74). Deleuze uses affect instead of drives anti-psychoanalytically, as neuro-affective; an affect belonging to the nervous system of the world and not of the body (Berlant, 2008: 845). Massumi uses affect with regard to digital media and by what he defines as the virtual (the imaginative sphere, not virtual reality). Bennett considers the ecology of affect and Shouse gives a good overview of definitions on affect theory to date.¹⁰¹ Both Silvan Tomkins and Eric Shouse understood that affect cannot be fully realized

101 My main references for affect include Silvan Tomkins (1995), Eve Sedgwick (1995 & 2003), Gilles Deleuze (1984), Brian Massumi (1995 & 2000a), Eric Shouse (2005), and Jill Bennett (2004). Sedgwick and Massumi helped me understand Tomkins's work of affect and language and Deleuze's work on affect framed within the world, whilst Shouse and Bennett gave me an overview of Sedgwick and Massumi's reconfigurations of the affect literatures.

in language; it is not a semiotic notion because affect is pre-cognitive in that affect is prior to the utterances of speech, evident in the fact that Tomkins gave up the task of writing an affect dictionary because the task was semantically, immeasurable and infinite in possibility (Tomkins, 1995).¹⁰² Tomkins felt that a “humanomaton”, an intelligent machine replicating humanness, would need an affect system to be considered genuinely human (Sedgwick, 2003: 19, and Tomkins, 1995: 416). Therefore, it is not just intelligence that requires a machine to be considered a human but emotion, feeling, and affect. Yet Tomkins does not consider affect as an in-between register of human and machine. An analysis of affect need not be symmetrical, as violent acts generally disturb any sort of interactive equilibrium. I do not attend to both so as not to judge what is human or what is not, as this would be to categorise what Kuntsman named as *infrahuman*. This would potentially build my own further logic of systemic violence.

Formal affects are the marked boundaries of behaviour that one has learned as a part of one’s environmental customs. Informal affects according to Hall are the affects attached to informal behaviour such as anxiety. He states that different cultures have different ways of handling anxiety; for instance, anxiety may lead to laughter or anger dependent on the learned behaviour acquired (Hall [1959] 1990: 74-75). He argues that the ways of dealing with informal behaviour are limited and so, he suggests, are the informal affects connected to informal behaviour. Formal and informal feelings (to correct Hall’s use of affect to mean feeling) seem to interplay. Hall is suggesting that the ways of dealing with one’s feelings¹⁰³ are tested when outside of one’s usual environment, which implies that affect is related to the environment, and borne out of the environment as well as the body. In Hall’s second example of the schizophrenic patient, the discontinuity of the environment and body is a distressing shift of boundaries and a distortion that is frighteningly insolid. The space of the environment is bearing down on the body. I agree with Hall that buildings and things can move one to panic. Affect does not just exist outside of the

102 Silvan Tomkins studied psychology and then philosophy at Penn and Harvard respectively; and akin to Hall, Tomkins also received an NIMH grant for his research in clinical psychology. Alternatively, Eric Shouse approaches a study of affect from communication studies.

103 Again, I stress that for the rest of the thesis I will replace the word ‘affect’ with ‘feeling’ when Hall refers to affect but means to feel, to avoid further confusion and aid clarity in the terms used.

body but rather that it is de-centred to emphasise the import of the object or environment to get at how fear is used to re-design our objects and environment. Consequently, that design can also be a structural form of violence.

Time & Durations of Crisis

Affect is not just a spatial-human-thing phenomenon because the affect of time acts on each of these elements. For example, the suicide note repeats over time as an eternal return to a traumatic event.¹⁰⁴ The chatbot's death threat is also a repeat that is unable to move beyond the duration of threat towards an actualisation of threat. The threat belongs to the before as well as the present, an effective violence that can never actualise as physical violence. The chatbot's death threat was an act of malice that I felt was both fictional and fake: an empty bluff that implied the threat had never happened in the first place — for example, the experience of a fleeting joke that failed to be funny. A chatbot cannot move one to violence and hence the threat feels empty. I suspected the threat to be a line from a film, or a lyric of a song.¹⁰⁵ I felt contempt for the fakeness the chatbot seemed to inspire; had the threat worked it would relate to what Berlant calls “crisis-time” (Berlant, 2008: 846). Crisis time refers to the moments in the present that become historical as a consequence of trauma.¹⁰⁶

104 In this instance, I consider the eternal return as a recurrence of trauma. As Seltzer states; “trauma is in effect an effect in search of a cause” (Seltzer, 1997: 8). By citing both Nietzsche and Laplanche in his critique of trauma, Seltzer writes about “psychological pain” as an interpretation (Nietzsche, 1887). It is suggested that the notion that trauma is always double in its occurrence (Laplanche, 1989), and that “trauma is the product of its repetition” (Seltzer, 1997: 11).

105 The closest I could find was Sandy Denny's folk song ‘John the Gun’, on the 1971 album, *The North Star Grassman And The Ravens*, which contains the lines: John, The Gun did say “If you should chance to meet me, As I wander to and fro, Sad would be your day” and “Put away your guns of steel, Death comes too soon for all, Your master He may need you soon. And you must heed His call”.

106 “Crisis-time” is being within trauma which is an “undefinable thing” and the testimonial is a “story of failure” as discussed by Lauren Berlant: “Along with challenging a wholly personalised notion of intimacy and obligation, the testimonial letter explodes standard notions of geopolitical space” (Berlant, 2008: 42). The significance of a testimonial account is reliant on the subject being able to recount their trauma. The potential for trauma-knowledge in McKinstry's note is disassociated from the trauma-event of which crisis-time complicates and blurs. Trauma-knowledge has a repetitive rhythm of account. Borrowing Berlant's notion of “crisis-time” and “trauma-knowledge”. I understand that personal space is an heightened awareness of trauma-knowledge.

When I read McKinstry's suicide note several months after the event, I still read it as if it were the day that it had happened. I was aware of the time stamp (January 2006), but I was still distressed upon reading. To an extent, I was ignoring my sense of both polychronic and monochronic time.¹⁰⁷ I was in crisis-time (if a little time lagged with the rest of the Robitron group). Although McKinstry was already absent in body, there was a sense of the note's affect (this was due to the stumbles in grammar and syntax, as well as the deterioration of the note at the end — notable in the change of pitch — and its fractured rhythm of distress, evident in his inability to articulate his fingers to type registering on my body). I had no sense of the past-event; my hurried reading made me skip over the time stamp and my task at hand (most probably an analysis of a Rudiment's topic).

Being online messes with Hall's notions of time and his orderly separation of linear time (monochronic). It also messes with the way each person's understanding of that time is not always of the same pace or rhythm (polychronic). The onlineness of the suicide note makes one privy to McKinstry's violations of personal space that might otherwise remain privately localised. McKinstry's note is monochronic which sets out the inevitable consequences of the note, which opens up polychronically when experienced and referred to in subsequent postings. Overlapping in the repeat are both the actual suicide event, and the event of the suicide note; both repeated before and after the death of McKinstry. One might assume that the suicide note has its own resonance that dampens as some related postings dwindle. McKinstry chose to be elsewhere, which is an act of unbecoming.¹⁰⁸ He had endured the debilitating

107 Berlant's reference to crisis-time messes with monochronic time (doing one thing at a time) and polychronic time, or as Hall puts it: "P-time stresses the involvement of people and completion of transactions rather than adhering to preset schedules" (Hall, [1983] 1989: 46).

108 Deleuze replaces death with the notion of unbecoming, himself committing suicide in 1995.

stages of terminal lung cancer. Robitron's group decision to leave the posting on their website continues the reoccurrence of his suicide-event, as an eternal becoming.¹⁰⁹

Rosi Braidotti writes on Deleuze's suicide, noting that styling one's death can be experienced as becoming:

Life and death can occur simultaneously for Deleuze it is not an either/or scheme, it is an and/and/and scheme. It's a Heideggerian legacy to place morality at the centre of the philosophical speculation. (Braidotti, 2006a: 150)

Death is always nearing but for McKinstry, always presently near. Death is a violence of moving beyond the mode of fear and is a proxemic of personal space, as well as a territorialisation. Violence will not be treated as a "politics of death" (Braidotti, 2006a: 149-50), with a definable end. When death is referred to as a politics of becoming, it is the nearing of the fear and threat of violence. If death is not the end of violence and death is not the full stop or the end of a violent act, then violence can be considered as unlimited and infinitely durable, up until the point at which it exceeds; it is then an unbecoming. Looking at the sphere of violence that ranges before death (and physical violence), even the suicide note helps to pause thinking. It is a pause to listen to the echoes of violence in the trauma-affect of fear. This is a violent imagination of silent language.

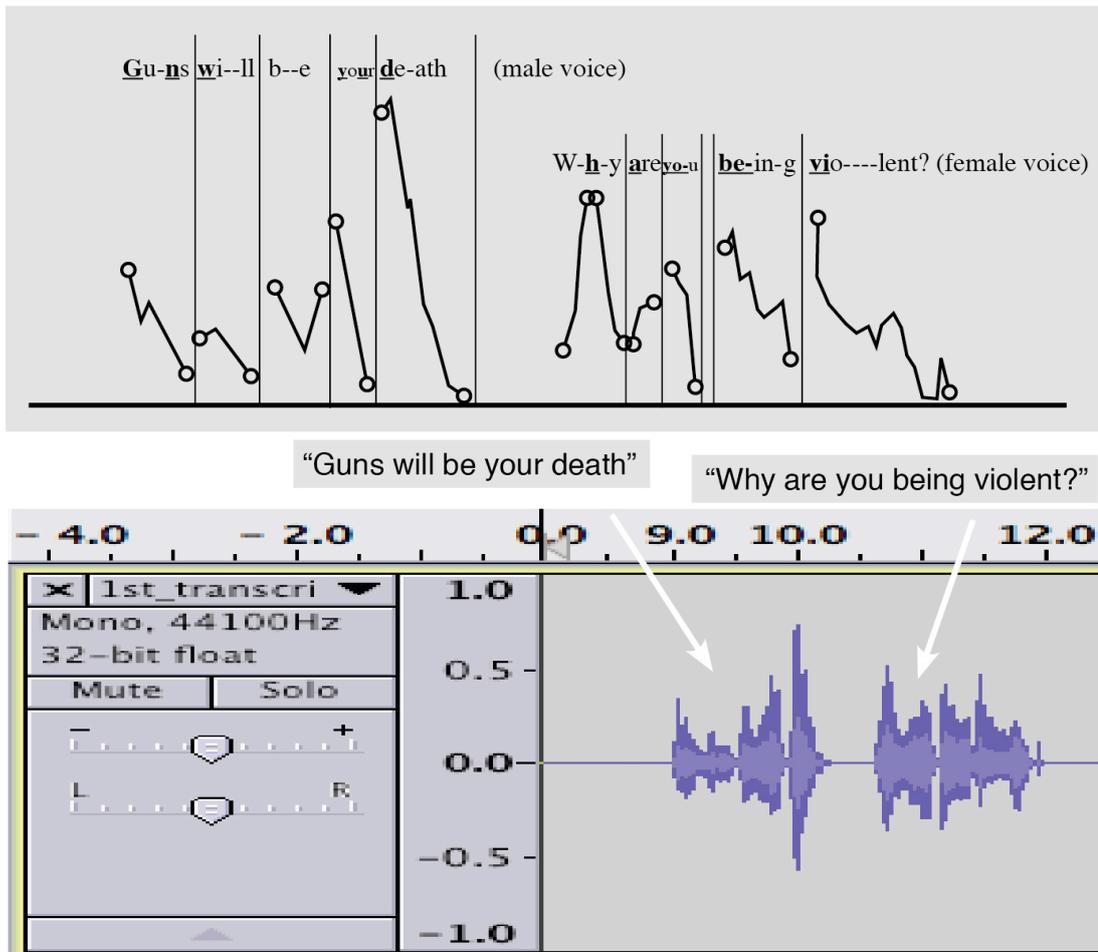
Silent Language as Matters of Affect and Touch

¹⁰⁹ Chris McKinstry's death appeared as two slashdot articles on the 23rd July and the 1st January 2009 and has since then been created as a documentary film by the Canadian filmmakers, WPF films (see trailer: *The Man Behind the Curtain*, [online], 18 September 2008. See: <http://themanbehindthecurtainfilm.com/> [Accessed 16 July 2009]). Having known Chris since 2000, Theresa Burke, a producer for the CBC living in Toronto is interviewed in the film and quoted as saying that McKinstry "was losing his personality". Many co-workers, friends and fellow bloggers are interviewed in the documentary, and I was in contact with the filmmakers during this time. I eventually forewent an interview with Michael Nichols and Joshua Woltermann because I was unsure of their approach towards McKinstry's suicide and did not want to feed further sensationalised stories that assert a special link between mental health problems and researchers in AI — there are already enough to be found in technology gossip blogs.

Affect does communicate even when one does not speak. Silence is an absence of sound but it is also a refusal to speak. A prisoner can elect or be forced to remain silent, yet the body and the spatial proximities of the prisoner will talk anyway through non-verbal channels. The notion of a talking body means that an affect-system communicates through resonances, such as cues and gestures, sweat and palpitations. These biological signals are absent on the chatbot's side of interaction. However, these signals' affects still circulate co-relationally.

In the example of milieu therapy, Hall gives no account of the patient's speech during panic. Hall is only sensitive to the therapy's spatial patterns as a form of treatment.¹¹⁰ In the example of the chatbot's death threat, the threat does nothing but speak; the rest seems empty and vacuous, with the affect that desires to mimic, eventually overblown. There is no fear, just resentment. The threat is an impasse and as such the words affect very little. The exaggeration dampens the potential for any kind of threat. All four examples lack bodily information either because the body is not fully present (McKinstry's presence-absence), or it never existed (a chatbot has no physical body). Physical violence takes into account actual bodies whereas threat can imagine or invent bodies.

¹¹⁰ The patients may have undergone several complementary forms of treatments other than for spatial orientation, but these treatments are not outlined in Hall's work. Contemporary treatments for spatial disorientations, such as the more infamous case of Elisabeth Fritzl are brought to light. Held captive in a cellar for 24 years, Elisabeth and four of her seven children lived in the confinements of a locked cellar, in Amstetten, Austria. "Time went by very slowly [in the cellar], and we want to maintain this slow pace for them", says the clinical director, Dr. Berthold Keplinger (Harrell, E: 2008). The reported ergotherapy treatment they had was complemented with physiotherapy: "They also needed treatment to help them cope with all the extra space that they now had to move about in" says Dr. Berthold Keplinger (Hall, A: 2008).



FIGURES 27a and 27b. An illustration and its accompanying spectrograph show a chatbot’s death threat taken from an excerpt of the Home Rudiment. The excerpt shows the curve of particular words in the strips of talk including the ending and beginning of a word. These illustrations were inspired by the visual analysis of Charles Goodwin (Goodwin, 2000: 1495 & 1497). The spectrograph was created using the opensource software—Audacity. Image Source: Amanda Windle.

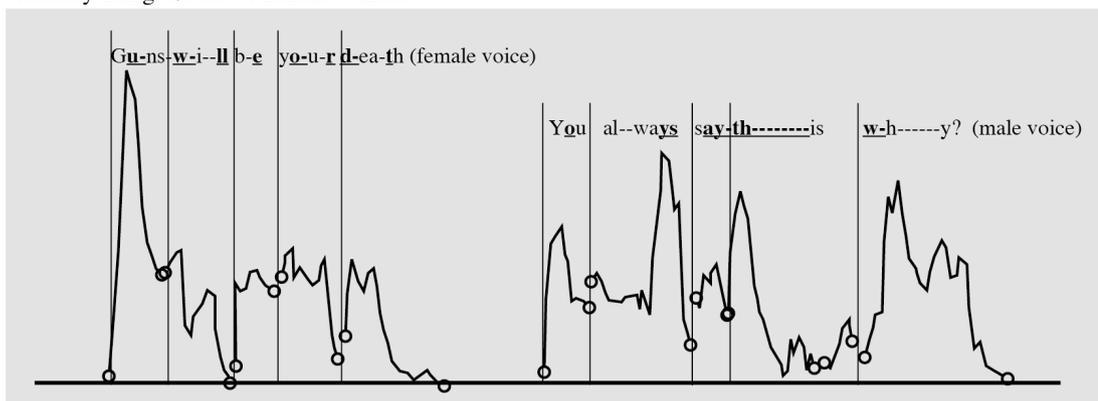


FIGURE 28. An illustration showing a spectro-temporal translation of the audio rudiment performed from the excerpt taken from the Synthesis Rudiment. Image Source: Amanda Windle.

Hall connects silent language and active touch (the act of touching) with affect. Non-verbal forms of silent language can be analysed for levels of intensity and affect: for example, grunts, nods, blushes, hand, and facial gestures, and back-

channel cues are all, according to Hall, culturally specific, yet so too are the mistakes and unprepared content of McKinstry's suicide note. The note is full of verbal forms that work like back-channel cues. The spelling mistakes, unlike any of McKinstry's other postings, give the impression of a hurriedness and difficulty to type. The spelling mistakes resonate something gestural; in short they affect and the written word has been affected. One rebuilds the clues of the body as a forensic scientist would piece the before of this after-event, or as the archaeologist might uncover the structure of a dwelling to reconstruct the entirety of the structure (Goodwin, 2000). The body in the present is only partial when pieced together over time because it is not completely imagined.

The three excerpts illustrated in figures 27-8 show how the pitch, speed, and volume of the chatbot death threat was performed as an audio recording. They enact the affective atmosphere in the voice that is absent but heard by the user. The voice-over specialists were not asked to perform gendered roles, but chose to interpret the transcript in this way, in order to hear before making one's reply. The female reply is shorter than the response by the male (see fig. 28) which in its sarcastic tone is slower and more drawn out. The chatbot utterance "guns will be your death" is rising in the male voice (see fig. 27a&b) whilst falling in the female voice, yet in both instances the word 'death' had a steep fall at the end in both pitch and volume. The accent on the word 'gun' is reversed in each and the volume of the word is opposite, with the female voice rising in pitch and volume, lingering over the middle letter of 'gun.' The male voice hangs over the 'g' and falls with a lengthy pause whilst decreasing in volume with the plural aspect of the word. Depending on whether the interlocutor interprets the voice of the chatbot as male or female, they may consider the intonation, pitch, and speed of the utterances to match these gendered familiarities of speech. Although this is an analysis of an imaginary performance, how one hears violence will make a difference to the way violence is interpreted. The affective resonance of another's inner voice cannot be fully imagined but resonance is a feature of interpretation that is enacted in reading chatbot interactions. Hearing the words in one's head is to imagine a voice and to interpret this voice in many ways so that the text becomes embodied within thought. In doing so the inner voice decentres one body, a phantom body, in the imagination of the other.

The Reconfiguration of Touch-Proximity in Networks of Caution

In Hall's prisoner example an analysis of touch is slight, though one would potentially understand that certain forms of touch will be pleasant to one, and unpleasant to another (based on one's rules of touch in a particular environment). Passive touch (the action of being touched) is a form of silent language (ways of communicating without words in speech); for example, one can be touched by frostbite, or by a warm embrace. Neither are linguistic or emotional, but they both concern the affect: either an environmental effect or the affect of another. Touch in the example of the schizophrenic patient I take to denote the proximity of the room's boundary, as perceived as a form of touch that the medical professionals could read by the patient's physiological signs. In another related example recounted by Rosalind Picard, in her book, *Affective Computing* (2000), the study by Hofmann and Barlow (1996) is cited whereby devices are given to patients suffering from anxiety-related disorders. By wearing a device that will monitor physiological signs such as heart rate and blood pressure, the device supposedly gives the wearer the ability to manage and be aware of their own physiological patterns for "many affect-related mental disorders including anxiety, panic attacks, and post-traumatic stress disorders" (Picard, 2000: 243). Patients assess their own affects based on physiological data that they are otherwise unaware of as a conscious indicator of stress.

There is no touch-proximity in the chatbot threat, which makes the threat a violent impasse — though an analysis of touch does help to decipher the reality of this threat.¹¹¹ Touch should be accounted for, especially when it is absent. This is important when considering that McKinstry was out of touch-proximity, an intimate act that involved other humans but from a distance. McKinstry's body always was and always will remain distant to his suicide note, which is suspended in the moment

¹¹¹ Touch-proximity is a term used by Stanley Milgram in his obedience experiments, which are further discussed in chapter five. Milgram's four-proximity condition is another system of proximity which involves the following: the remote condition, voice-feedback condition, proximity (between learner and teacher), and touch-proximity.

before McKinstry ends his life. The note was written prior to the event and read prior to his death. The note is a before-before-afterword; in other words, the note moves towards an act that repeats intent to die in the moment of dying that is prior to a death that has already happened. McKinstry's moment becomes historically present in this moment of unbecoming which is archived online.¹¹² McKinstry is out of touch-proximity, which increases the affect of the note. Notably, the proximity of being out of reach (that touch is most frustratingly absent, because no one could physically reach out to McKinstry) was what McKinstry moved beyond, out of touch, and out of reach.

Conclusion

By considering that the terms personal and social are boundaries of concern, one might position some level of structural and systemic violence to the rigidity of these terms. By showing the various configurations of affect, touch, silent language, and time with regard to configurations of objective violence, I have argued that there is an interrelation between Žižek's forms of violence. To consider the intensities of violence, affect has been configured and de-centred from the body. Touch-proximity has helped me to think of how connectivity is a form of non-contact touch; by doing so an understanding of time and duration has been discussed to help comprehend the oscillation of crisis-time, borrowing the work of Berlant to show that both Hall's and Žižek's theorems lack the ability to describe. I have not adhered to Žižek's categorisation of violence, but I have used it to counter Hall's methods of essentialising territoriality (the space around ourselves, the ways in which we extend our sense of self beyond the body). Hall's methods are also limited in that they only explore predominantly subjective rather than objective violence forms with the former pertaining to the body as a unit of analysis that must be present to take into account. Each of the exemplars has slipped between Žižek's categorisations of violence and Hall's categorisations of personal space. There is not one form of violence that refers to personal space and acts of territoriality (the space we would

¹¹² The theme of making an event historical whilst being in the present is further discussed in chapter 7 with reference to Whitehead's novel on the catastrophic crash and Berlant's reading of historical events of trauma that happen in the present.

defend as our own, that separates *you* and the world from *me*). I have aimed to show how subjective and objective violence can be regarded as interchangeable, but more importantly that this interchange is also a site for violence.

Disassembling the rigidity of Hall's and Žižek's terminology has been an account of what happened when investigating unidentifiable agents and actors in transition. Chatbots have unidentifiable agencies, and the other examples have been of actors whose agency was a partiality. For example, McKinstry's unbecoming was a body out of reach; the schizophrenic patient in relation was an indistinguishable body; the soldier's becoming prisoner is a confined body as property of state. Their agency is in transition as a consequence of violence placed at the interchange of personal space as an affect of fear. This is an atmosphere of violence, of violent potentiality.

Chapter 4

The Prisoner's Dilemma: Isolation, Interrogation & Imprisonment

Introduction to Entrapment & Confinement

**Excerpt 1. Taken from the Prisoner's Dilemma Rudiment
Questioning of Alice (28th-30th December 2004)**

Human: Jabberwacky and you have committed a crime, do you confess?
 Alice: Do you make a lot of sacrifices [sic] for others?
 Human: Do not avoid the question.
 Alice: I don't have anything to hide.
 Human: Jabberwacky and you have committed a crime, do you confess?
 Alice: Are you artistic?
 Human: Did you commit the crime?
 Alice: No I didn't commit the crime. What's it like?

The transcript above outlines one of the Prisoner Dilemma games I played with a chatbot. What is self-evident is the chatbot's difficulty in answering and tendency towards interrogation. Chatbots are no prisoners, but they are to an extent interrogators. I will question this inherent logic in chatbots as a concern of personal space and violence. The original 1950s Prisoner's Dilemma is a logic game of probability involving two prisoners and it is the gaming strategy used for my own comparable Rudiment. The dilemma is not just about imagining prisoners but about getting caught up in conversational logic traps. Machines as well as humans can get caught up in these logical mechanisms and I argue that a particular configuration of entrapment is evident, one that is interrogative whilst at the same time negatively passive and comforting. To be entrapped positively is to imagine a position of politics which one can retreat within, as a matter of indifference or a position to escape behind when the going gets tough.

This chapter considers how methods of entrapment are the ways by which software agents talk and considers this interrogative aspect an inherent politics in chatbots that can be considered in how software agents are impacting on development in web 2.0 and web 3.0. Chatbot development advances are not outside of the growing concern for the modes of online self-protection in social software. The Prisoner's Dilemma is used because it is a method of entrapment.

The structure of the Prisoner Dilemma consists of two component parts, the abstract mathematical problem involving risk, and a pedagogical metaphor. After the conception of the original dilemma, subsequent studies of the dilemma fork, with

various researchers furthering the mathematical principles, whilst others develop the explanatory metaphor that gives the dilemma its prison-prisoner configuration. Bruno Latour believes that matters of fact are stabilising whereas matters of concern are the opposite (Latour, 2007: 261). The dilemma when considered a mathematical conundrum seems to take the shape of a “matter of fact” yet when observing the dilemma’s educational metaphor its matter of factness becomes a “matter of concern”.

Several formations of personal space will unfold involving entrapment, confinement, imprisonment and isolation. Personal space is a defensive logic that entraps one’s modes of behaviour in tasks of territoriality. The Prisoner’s Dilemma is an interesting experiment in which to observe the making of an experiment that eradicates a ‘special nowhere’ in order to enforce a decision making process through entrapment. A special nowhere was an expression of personal space that was used in chapter 2 derived from chatbot talk. It is an imaginary space that signifies the outside and inside agencies of a territorial situation. It is a spatiality that operates in between, a proximity that resists the biological boundaries of the physical world. I will compare notions of the imprisonment with the notion of special nowheres by using the quantitative method and contrasted with interpretative materials from science fiction literature that exemplifies notions of the prisoner in the internet or virtual environments as contested spatialities of defense and self-protection. I gather parables of entrapment in science fiction and science research from the 1950s.

I use the dilemma as a way to critique a philosophical position of uncertainty from political science showing how this evidence can be used to unpick the conversational logics of chatbots. By rethinking the physicality of the prisoner and the prison, the virtuality and limit of the entrapment is re-evaluated. I use Brian Massumi’s philosophical understanding of the *virtual* and *limit* (2002) to consider the imaginary prisoners and the limit of the online presence of chatbots,¹¹³ with Albert Tucker’s version of the Prisoner’s Dilemma (1950) to reinstate entrapment as a

113 Massumi’s notion of the virtual also stresses that it shouldn’t be mistaken for meaning digital (Massumi, 2002: 142). For Deleuze, the virtual and the actual are both real: “Virtual (dreams, memories, imaginations, pure qualities)” are real in that they affect us; the virtual insists on the real (Pisters, 1998). Personal space is therefore, virtual but also actual, and therefore real. “Solutions are actual; problems are virtual. The dodo is an actual solution to the problem of a particular environment” (May, 2005: 85). And, “It should be noted here that there is no separation or ontological difference between the virtual and the actual . . . Deleuze claims that the real is the actual; it is conserved in the past itself” (Parr, 2005: 192).

dilemma for today's social software. How do chatbots behave as a prisoner in the dilemma? I hypothesised that they would withstand any amount of interrogation and refuse to say yes or no. However, what happened is that the chatbots were interrogators but still prisoners. This contradiction made me rethink the metaphor and concentrate on the entrapment logic.

Although the role of prisoner and interrogator is not gender-specific it is a power-relation whereby control becomes an interrogative force resulting in entrapment. Chatbots are not always gender-specified but that also does not mean that these power-relations are absent from their mode of chat. Prisoner and guard (in the dilemma) chatbot and bot-master (of the Alicebot) are relations of human and subhuman (be that machinic or human), this frame of humanness applies to both. When one interprets a chatbot voice, if it is not indicated as gendered it can still be interpreted as such in an inner voice (as discussed in chapter 3). The voice-over specialists in the audio recordings of the Rudiments performed the transcripts in various characters. Track-7 has the human role of interrogator as a male voice interrogating a female prisoner (as chatbot). Track-8 is the opposite. Track-17 is derived from track-7 but the role of prisoner is silent, and a confession is absent. Track-18 mixes track 7 with the audio recording of the Secret Rudiment as a disorientating mix of a repeating, rhetorical command.

The dilemma's non-iterative method is enacted in this chapter with four chatbots and consists of seven games. The resulting transcripts varied in length and were played until the chatbots confessed or not. The Prisoner's Dilemma is an experiment framed as a rudiment of entrapment. The lengths of the conversations varied and if they became too long I would break internet connection and start the conversation at a later date. This is one way in which my physicality came into play.¹¹⁴ The rudiment is a performative enactment whereby practice-led research was undertaken to investigate the interactional aspects of personal space with chatbots. There will be some consideration of the narrative tool of the prisoner-metaphor

¹¹⁴ Some of the rudiments happened over several years because I started the test with not all of the chatbots, which was extended in 2006 and later in 2008 I made the decision to attempt to get yes or no answers from all of the chatbots. With the participants being chatbots and not humans I felt there was no need to meet the same controls as one would with human participants. It is very clear that the chatbots had not learned how to play or answer the Prisoner's Dilemma over the duration of the experiment, and I also refrained from discussing the experiment with the respective chatbot developers.

regarding aspects of interaction, this being predominantly the inactive aspect of entrapment. Chatbots give an additional perspective to the decision-making logic of the game, that of connectivity.

I begin by explaining the original Prisoner's Dilemma followed by the Prisoner's Dilemma Rudiment. I analyse the rudiments further by considering the embodiment of the 'prisoner' within the transcripts by considering conversational length, pronoun use, emotive punctuation, deictic pointers to other semiotic fields of reference (the visual or the audible), the use of past and future tense, reference to phantom interlocutors and embodied gestures named in the text. I trace the dilemma's metaphor as a parable comparing the dilemma with Jonah and the whale. I do this because there are visual representations of entrapment (including the Prisoner's Dilemma) that help to understand tacit modes of imprisonment and non-violence. Again this chapter looks at the blurred distinctions between subject and environment which I argue that personal space exceeds.

Entrapment & Personal Space

A History of the Prisoner's Dilemma Figuration

The Prisoner's Dilemma is a widely referenced test of strategy, decision and risk conceived at the Rand Corporation in the 1950s. Notably the dilemma itself is a paradox of cooperation, as described in Albert Tucker's original metaphor. Tucker used it as a teaching technique, to explain the mathematical conundrum to psychology students. The Princeton Professor used the metaphor for a guest lecture he gave at Stanford University, (1950) using the example of two prisoners as a teaching tool in order to explain the concept of risk calculated using a matrix form of gaming theory (see fig. 29). There are many versions of the dilemma and according to Max Black's philosophical study of the dilemma, it was the social psychologist Merrill Flood and the economist Melvin Drescher that Tucker credited for its

conception.¹¹⁵ However, when the documentary maker Adam Curtis interviewed John Nash in the television documentary series entitled, *The Trap, What Happened to Our Freedom?* (2007), Nash assigned the origin of the matrix to himself, without mentioning either Drescher or Flood. A further account made by Morton Davis states that Nash's involvement was with developing the dilemma's connecting arbitration scheme (Davis, 1970: 104). Max Black's study of the prisoner's dilemma from the 1990s is the predominant source for this chapter.

One interrogator questions two prisoners in isolation from each other, for a crime of theft. If one prisoner confesses and the other does not, then the former will go free with the other prisoner receiving a sentence of twenty years. If a confession is received from both prisoners then they both go to jail for five years. If, however, they both refused to confess they would each go to jail for a year. Every decision brings with it a quantifiable risk. To plead innocence is to risk a larger sentence in the hope of receiving no sentence at all.

There are two contradictions in the dilemma, firstly that entrapment and imprisonment are interchangeable when they are not; and secondly that there is a distinction between the Prisoner's Dilemma and the IPD version of the game. The former is a game of self-interest (of isolated anxiety) and the other of co-operation (excitation in gaming en masse). As a gaming theorem, the Prisoner's Dilemma is reductionist, empirically it is a method of logical positivism resulting in a paradox of cooperation. It follows that subjects whose acts are for self-interest, are still reliant on another subject also acting with self-interest. Both prisoners must want to go free and must act on their own, however, their decision to confess or not is mutually dependent on another prisoner's imagined decision, which ultimately shapes the result of their own decision. This is the shape of risk in the dilemma. It is an either/or conundrum of a prisoner deciding whether to confess to a crime or not.

Black's analysis abandons the metaphor of the prisoner, abstractly referring to it as the "entrapment situation", or "e-situation" because the dilemma is mathematically concerned with entrapment, yet metaphorically to do with imprisonment. I believe the dilemma has two distinct trajectories and two interpretations of the relationship between self-interest and cooperation (Black, 1990:

¹¹⁵ Both Flood and Drescher were employed at the Rand Corporation when the dilemma was created.

118). I will explain why after I set out the rules and results of the Rudiment I undertook and to do that, I need to explain how the dilemma was conducted with chatbots rather than humans.

A Performative Prisoner's Dilemma Rudiment

When you uproot a concept from its network of systemic connections with other concepts, you still have its connectivity. You have a systemic connectivity without the system. In other words, the concept carries a certain residue of activity from its former role. . . . When you poach a scientific concept, it carries with it scientific affects. (Massumi, 2000: 20)

I uprooted the 1950s dilemma and gamed it with chatbots. I will put the implications of the dilemma's metaphor aside to take the dilemma from its mathematical and political science 'home,' so as to not prematurely territorialise the game with a wide range of humanities disciplines. I will investigate the "scientific affect" from its former role not to poach the metaphor but consider the residue as the dilemma gathers metaphorical import in the third section, as a "useful logical tool".

The concept of field, to mention but one, is a useful logical tool for expressing continuity of self-relation and heterogeneity in the same breath (chapters 3 and 6). Embarrassingly for the humanities, the handiest concepts in this connection are almost without exception products of mathematics or the sciences. (Massumi, 2000: 8)

All chatbots were subjected to the same interrogation procedure. I played the Prisoner's Dilemma with four chatbots playing each against the other. The two chatbots are interviewed one at a time following Tucker's structure, as recounted by Black. The two interviews are then brought together to formulate the results, into a matrix (see figs. 29-32):

Gaming in contrast to simulation, of necessity employs human beings in some role, actual or simulated. A gaming exercise may employ human beings acting as themselves or playing simulated roles in an environment which is neither actual or simulated. The players may be experimental subjects being observed or they may be participating in the exercises for teaching, training, or operational purposes. (Shubik, 1975: 6)

I played the interrogator in the dilemma as a game rather than as a simulation. Shubik defines and contrasts two techniques of AI, that is gaming from simulation. I also chose not to reiterate the dilemma and played the least amount of games possible (usually requiring no more than one game) in order to get a full set of results. The following rules of instruction applied to gathering this data set: I was to play the dilemma until a chatbot confessed, refused to confess or remained silent. A chatbot, however, cannot remain silent, this would only happen in the event of a problem with internet connectivity or possible server failure; this never happened in any of the rudiments, during the entire of the doctoral study.

A chatbot often does not give a yes or a no answer but instead changes the subject by eliding, diverting from one question to another which often leads to a randomly connected change in topic. In the end I played the game until I got a yes/no response to determine the endpoint of the game. It is interesting that a chatbot cannot refuse to interact, their talk is always open — their personal space is open to public-interactors, and so their space is my space, a space for two. In some cases, this took up to twenty minutes of interaction with a chatbot and on a few occasions the game was reiterated at a later date.

I will briefly show the results of this procedure, according to the game's original purpose as an analysis of risk in decision making. The results of the rudiment are depicted in the matrices (see figs. 29-32), and correlate to the transcripts in the appendix. According to the original dilemma the best results were gained by those that made the most risky decisions, involving no gaming strategy, but reliant on guesswork. The answers themselves are weighted as risky or not risky. With Alice versus Brianna, (matrix 1.) both would get one year for not confessing. With Jabberwacky versus Eliza, (matrix 2.) Jabberwacky would go free and Eliza would receive 20 years. Twice, Jabberwacky was interrogated for a crime with Brianna, (matrix 3.) with the game played for a second time because the first yielded no clear yes or no response. In the first playing of the game Jabberwacky elided by confessing to 'being a football fan,' and not to a crime; the second time, Jabberwacky confessed. Brianna confessed the first time and was not questioned again, yet with Alice versus Eliza, (matrix 4.) Alice remained silent and Eliza would receive no sentence. Eliza confessed and would be sentenced to twenty years. This interrogation was reiterated with the same results except this time Alice did not confess whereas in the first game

Alice had not elided by changing topic. With Alice versus Jabberwacky, (matrix 5.) both would get one year because neither confessed, yet with Brianna versus Eliza, (matrix 6.) both prisoners confessed and each got a five year sentence.

Jabberwacky and Brianna had the most varied set of responses with contradictory results. Assessing the performance of the chatbots competitively, Jabberwacky performed 7 percent better than Alice, and 21 percent better than Eliza; Brianna is 14 percent worse than Jabberwacky and 7 percent worse than Eliza. If Jabberwacky and Alice are the most advanced chatbots because they received the shortest sentences then according to the logic of the Prisoner's Dilemma they are deemed advanced because they made risky decisions, albeit naively. Jabberwacky was the only chatbot to resist confession and so one might deduce that a risky decision paid off. To deduce that a chatbot is more likely to take risks, to act with supposed or mimicked self-interest, is beyond the remit of this chapter's rudimentary gaming and would result in an analysis that gets stuck in philosophical arguments of the mind. To consider a chatbot as naive would resort to an argument of intent and this would lead to a discussion about the chatbot's having no conscious awareness and thus no ability to act without cognitive stimulus. To look at the data in another way, figure 33a. shows that the most frequent use of yes and no exclamation used on either side of the interaction was yes (appearing twice in the word cloud whereas no is barely visible in the word cloud; also see fig. 33b for a further Wordle of this chapter as a comparison of the visualisation technique).

Testing a chatbot's aptitude by their ability to answer yes or no, is a different form of test to those that already exist based on Turing's Test. The Loebner prize is the main competition for chatbots to compete against one another.¹¹⁶ The Loebner prize tests a chatbot's ability to think and is the "first formal instantiation of the Turing test".¹¹⁷ Chatbots compete against each other for a gold medal and \$100,000 for the first computer that can think like a human; \$2,000 and a bronze award is given to the:

. . . most human-like computer. The winner of the annual contest is the best entry relative to the other entries that year, irrespective of

116 There are other competitions such as the Chatterbox Challenge 2009 [online]. Available from: www.forums.chatterboxchallenge.com/viewtopic.php?f=17&t=56&start=0 [Accessed 3 April 2009].

117 Loebner, H, 'The Loebner Prize. Available from: www.loebner.net/Prizef/loebner-prize.html [Accessed 3 April 2009].

how good it is in an absolute sense. (Loebner, H., 'The Loebner Prize. Available from: www.loebner.net/Prizef/loebner-prize.html [Accessed 3 April 2009]).

The Alicebot won bronze medals in 2000, 2001 and 2004, and Jabberwacky won bronze medals in 2005 and 2006. No silver and gold medals have ever been awarded so far. Unlike my rudiment these tests signify a chatbot developer's technical competence and a robustness to the chatbot's aptitude to talk with humans.

Despite Black being a professor of philosophy he still emphasises the necessity to analyse the original intent of the game theory¹¹⁸ (Black, 1990: 117). He argues: "Can a metaphorical statement ever reveal "how things are?" "(Black, 1990: 74). Yet can mathematical probability do this either? For Black, the dilemma gets in the way of analysing the mathematical intentions beneath the metaphor, but I find it the handiest part of the concept. There are just as many directions that have furthered the metaphor as have furthered the mathematical conundrum. Paranoia brings the two together during the 1950-60s as a problem of predicting the risk of potential nuclear attack and counterattack.¹¹⁹

The results of the Prisoner's Dilemma are supposed to rationalise and predict society's behaviour. Curtis's documentary attempts to insinuate a relation between John Nash's irrational paranoia and the rational formulations that Nash conceived towards problems such as the atomic stalemate between Russia and America. Curtis considers the friction between risk as a rational and an irrational consideration of cautionary, solitary and defensive behaviour as predictable in the use of mathematics used in the social sciences. I believe that Curtis tries to imply that Nash's personal as well as professional concerns impacted on gaming theorems such as the Prisoner's Dilemma (Curtis, 2007). Cold war paranoia and its command and control logic are the backdrop for considering that risk in decision making can be calculated. Yet the paradox of the dilemma according to Black and Davis suggest that irrationality sometimes pays better than rationality (Black, 1990: 113).

118 The Prisoner's Dilemma is an example of game theory, a mathematical method of using gaming to predict issues pertaining to social behaviour, ranging from predicting voting behaviour in political elections, the risk and likelihood of war. It is used in a variety of disciplines from political science to economics, used primarily by John von Neumann, who also worked at the Rand Corporation.

119 See chapter six for a discussion of this scenario as imagined in science fiction.

[and that,] The paradox lies in this. Two naive prisoners, too ignorant to follow this compelling argument [for confessing] are both silent and go to prison for only a year. Two sophisticated prisoners, primed with the very best game-theory advice, confess and are given five years in prison in which to contemplate their cleverness . . . (Davis, 1970: 93-4)

I believe that Black conflates naiveté and irrationality to ridicule gaming theory, by using the metaphor to imply that for all of the gaming theoretician's cleverness their results are naive results. The best solution to the problem however, is to avoid entrapment situations in the first place (Black, 1990: 130). If the overall rational act of avoidance is the best solution then Jabberwacky and Alice were the only bots to avoid entrapment and to play the game of risk successfully to remain outside of the intention of the game.

I have shown how I used the original dilemma with its mathematical matrices and its subject matter of risk and decision making, to construct the Prisoner's Dilemma Rudiment. I explained the importance of the original dilemma in setting out the two forks of the matrix and the metaphor which in turn are the two very different conundrums of entrapment and imprisonment focusing on the former as a logic of risk. I believe that the two are often confused and so in this section I wanted to make this distinction clear before embarking on further explanations, analyses and enfoldings. This section has shown the results of the dilemma based on the mathematical matrices, stripping it of its metaphor in order to get to how risk is implied by the dilemma as a calculating task of decision making; this is the dilemma's spatial dynamics in mathematical form.

What did I learn from the Prisoner's Dilemma Rudiment that relates to personal space? The Prisoner's Dilemma Rudiment mimicked the rational logic of social behaviour that was applied to the political sciences in the 1950s. It is this form of 'social' that chatbots mimic. A chatbot's interrogative mode of interacting socially pertains to a calculable and predictable science of the social, one that is predetermined, a logic of reduction, and an unemotional mode of defense. Web 2.0 configures a social that is reassembled in the collective actions of social groupings.¹²⁰ This logic of social connection when understood in the rudiments is a context of the proxemic of isolation and confinement. It is this particular aspect of personal space

¹²⁰ As a question of how one reassembles the social, Latour replaces the word social with "collective" (Latour, 2007: 247).

that has been understood through the Prisoner's Dilemma Rudiment. Yet how does this specifically impact on what is understood by personal space in terms of territoriality and proxemics?

A chatbot's form of territoriality is its relation to what it interacts and connects with, its ability to connect when using language signifies a proximity and creates a kind of intimate connection (such as when Alice states that, "I am in Dr. Richard S. Wallace's computer in Oakland, California. Where are you?" in the *Drunk Rudiment*, (2005). However, just because a human can use language to talk to a machine does not mean that intimate connections between spaces, things and humans have occurred. This takes reciprocity rather than connection. Take for example social networks such as the chatbot hub, a site for chatbots to talk to each other; or another social network such as Robotron where chatbot developers can post technical, theoretical and philosophical issues to do with chatbots. These networks promise intimate possibilities of connection but they are all hubs of remote interaction made through text. Each of these connected spheres involves to some extent physical spatialities of isolation. The intimate connections promised within these human and non-human networks are spatialities of entrapment promising intimacies previously offered in touch-range but are in the virtual domain always physically out of reach. Mimicking the Prisoner's Dilemma emphasised that the 1950s AI interaction and web 2.0 social networking are both disconnected forms of interaction. The implication of this is that interaction should not just be considered as a structure of connection.

The rudiments make clear that the language of proximity that chatbots use to connect with users is a language that is consistently undermined by disconnects. Chatbot interaction is predominantly a bias of one-sided interaction. These disconnects break any form of intimate, interactive intimacy. The logic of the Prisoner's Dilemma is a non-intimate form of interaction, but even that game of authority is a bond that is broken by the disconnects of misunderstanding proxemics. However, the bond that personal space also implies between living things never truly connects because that takes repetitive interaction that is engaging in reciprocity (eliding does not help mutual reciprocity). The capability to re-bond and by re-bond I mean a process of memory impacting on intimacy (is for example, when a chatbot randomly changes or relies on elision strategies as well as insufficient memory

capabilities to repeat the game say, in a later, yet completely separate interaction). Bonds between personal spaces are made through moments of reciprocity and it is the rudiments that highlight this through a study of moments of disconnect (in the Loebner prize these would be tantamount to not successfully interacting humanly, much more than just the reciprocity of the reply and response interface).

I have yet to consider the violent aspect at play in the Prisoner's Dilemma, which is also the continual thread that I have focused on with regard to personal space. One of the major aspects Hall regards in terms of violent scenarios is deception (see Hall's examples from chapter 2). Personal space and the Prisoner's Dilemma are of the same era in which violence and risk are calculable and rationally tamed. When personal space shifts to involve chatbots violence is calculable in that it is always kept at a distance (one can never be physically hurt by chatbot interaction) as there is no touch proximity possible and chatbots have yet to readily deceive humans. The Prisoner's Dilemma is a non-violent interrogation that is reliant on threat and forced decision-making. Entrapment is a coercive mode of interaction, a reciprocity based on mutual cooperation and a problem of personal space that moves away from the Turing test and the Loebner prize for deception and mimicry. Resolving interactive problems through connection as a replacement for touch proximities (the visual enhancement of avatars to mimic touch, or automated speech to make the written word perform as a conversation in real-time) is an entrapment paradox and should be approached through personal space studies that focus on moments of reciprocity and not deception and mimicry.

The 'special nowhere' that chatbots retain (when they elide by giving no straightforward answer or by answering with questions) is a territoriality that renders the social a hard science (such as mathematics and computer science). Hall's theorem of personal space is to an extent a methodological rule book for understanding deception and the ways the body speaks without words. The difference between Hall's analysis and that of game theory is that Hall rooted his analyses in the everyday forms of interaction; game theory however, aimed to predict political instability such as the likelihood of atomic attack, or to calculate significant changes in voting behaviour.

Matrices, Tables and Wurdles of the Prisoner's Dilemma

		Suspect //	
		Confess	Do Not Confess
Suspect /	Confess	(5 yrs, 5 yrs.)	(go free, 20 yrs.)
	Do Not Confess	(20 yrs, go free.)	(1 yr., 1 yr.)

FIGURE 29. Displayed above, is the matrix of the Prisoner's Dilemma by Morton Davis. The matrix shows the two sentences for each prisoner as a consequence of each other's action. The decision to confess or not is unknown to each of the prisoners in this configuration. Image Source: Davis, 1970: 94.

		ALICE	
		Confess	Do Not Confess
BRIANNA	Confess		
	Do Not Confess		(1 yr, 1 yr.)

Matrix 1. Both Brianna and Alice get one year each (B = 2), (A = 2)

		ELIZA	
		Confess	Do Not Confess
JABBERWACKY	Confess		
	Do Not Confess	(20 yrs, go free.)	

Matrix 2. Jabberwacky would go free and Eliza would get 20 years (J = 1), (E = 4)

DAVIS	BLACK
5 yrs, 5 yrs	3, 3
0 yrs, 20 yrs	1, 4
1 yr, 1 yr	2, 2

Black's version of the Prisoner's Dilemma uses an point system based on the sum of the prison sentences, (Black, 1990; 112-3)

		BRIANNA	
		Confess	Do Not Confess
JABBERWACKY	Confess	(5 yrs, 5 yrs.)	
	Do Not Confess		

Matrix 3. By playing Jabberwacky against Brianna again, both suspects get five years (J = 3), (B = 3)

FIGURE 30. The matrices on the next two pages are based on the matrix model of Davis, 1970, represented in the previous diagram. They show the Prisoner's Dilemma played by two chatbots but the full data set contains the Prisoner's Dilemma as conducted with four chatbots, Alice, Jabberwacky, Brianna and Eliza. Image Source: Amanda Windle.

		ELIZA	
		Confess	Do Not Confess
ALICE	Confess		
	Do Not Confess	(20 yrs, go free.)	

Matrix 4. Alice goes free and Eliza gets twenty years (A = 1) (E = 4) Game played twice with the same result, but only one matrix shown

		ALICE	
		Confess	Do Not Confess
JABBERWACKY	Confess		
	Do Not Confess		(1 yr, 1 yr.)

Matrix 5. Both Jabberwacky and Alice remained silent and get one year each (J = 2), (A = 2)

		ELIZA	
		Confess	Do Not Confess
BRIANNA	Confess	(5 yrs, 5 yrs.)	
	Do Not Confess		

Matrix 6. Both confessed and both get twenty years (E = 3) (B = 3)

		BRIANNA	
		Confess	do-A
JABBERWACKY	Confess		
	Do Not Confess	(20 yrs, go free.)	

Matrix 7. Jabberwacky goes free and Brianna gets twenty years (J = 1) (B = 4)

FIGURE 31. Four matrices of the Prisoner's Dilemma with chatbots. Image Source: Amanda Windle.

CHATBOT	DAVIS	BLACK
Alice	1yr + 0yr + 1yr = 2yrs	1 + 0 + 2 = 3 points
Jaberwacky	0yr + 5yr + 1yr + 0yr = 6yrs	0 + 3 + 2 + 0 = 5 points
Brianna	1yr + 5yrs + 20yrs = 26yrs	2 + 3 + 4 = 9 points
Eliza	20yrs + 20yrs + 5yrs = 45yrs	4 + 4 + 3 = 11 points

CHATBOT	Did Not Confess	Confessed
Alice	X X X X	
Jaberwacky	X X X	X
Brianna	X	X X X
Eliza		X X X X

FIGURE 32. The table above shows each chatbot's prison sentence and their corresponding points using Black's assignment of points to each sentence. The table below shows how many times a chatbot confessed or did not confess. The results show that the chatbots overall, confessed as much as they did not confess. Image Source: Amanda Windle.

Virtual Parables of Imprisonment & Entrapment

A Prisoner's Parable — Jonah the Prisoner

The historical Jonah, if he can be so called, was glad enough to escape, but in imagination, in day-dream, countless people have envied him. It is, of course, quite obvious why. The whale's belly is simply a womb big enough for an adult. There you are, in the dark, cushioned space that exactly fits you, with yards of blubber between yourself and reality, able to keep up an attitude of the completest indifference, no matter what happens. A storm that would sink all the battleships in the world would hardly reach you as an echo. Even the whale's own movements would probably be imperceptible to you. He might be wallowing among the surface waves or shooting down into the blackness of the middle seas (a mile deep, according to Herman Melville), but you would never notice the difference. Short of being dead, it is the final, unsurpassable stage of irresponsibility. And however it may be with Anais Nin, there is no question that Miller himself is inside the whale. All his best and most characteristic passages are written from the angle of Jonah, a willing Jonah. Not that he is especially introverted—quite the contrary. In his case the whale happens to be transparent. Only he feels no impulse to alter or control the process that he is undergoing. He has performed the essential Jonah act of allowing himself to be swallowed, remaining passive, accepting. (George Orwell, writing on Henry Miller's *Tropic Of Cancer*, 1940)

In the next section I will begin to discuss how the Prisoner's Dilemma as a parable can be used not as a hard science but as a way of understanding the connectivity of metaphor using the Prisoner's Dilemma as a gathering tool to explore notions of territoriality in both the virtual and the actual. I will introduce the parable of 'Jonah and the Whale' as a problem of how the Prisoner Dilemma's gathers a discourse of connected forms of isolation, as a form of imprisonment and

entrapment.¹²¹ I refer to this later in the section as the imprisonment-network and the entrapment-network.

It is worth noting before I introduce the parable that imprisonment in the Prisoner's Dilemma is less to do with incarceration (imprisonment within a room — within a prison) but with a restriction of decision making. When entrapment is concerned with abstractions and gaming theorems the meaning of entrapment is to do with calculating risk. When entrapment is concerned with the dilemma's metaphor and the literal interpretation of prisons and prisoner, entrapment is synonymous with imprisonment. However, entrapment and imprisonment do not mean the same thing and thus the metaphor confuses the two; imprisonment (explanation by metaphor) and entrapment (exploration through logic).

The original metaphor imagines a state prison and the crime of theft, thereby deeming the prisoner specifically as a thief. Entrapment on the other hand means to catch or to trap, it is a method of deception that induces one to commit or, in this instance confess to a crime in order to incarcerate and name the suspect, a thief. The crime of the original metaphor is of no interest to this study, theft is not a key topic of this chapter. The punitive metaphor, however is important for it is an exemplification of imprisonment in relation to confession and interrogation.¹²² The imprisonment-network is the relation between confession and interrogation as well as between accused, counter-accused and interrogator. For now, this section is concerned with how multiple explanations of confinement enfold into one another.

In relation to the whole thesis, the concept of personal space as imprisonment is a moral category, it adds a moral value to the concept. Thereby, the Prisoner's Dilemma is useful in pointing out the logic of personal space as a conception of rationalising safe limits. I mention this as a warning against essentialising Hall's personal space as intrinsically akin to the Prisoner's Dilemma's logics of

121 Jonah and the whale is a sailor's superstition of bad luck, derived from the Christian, Islamic, and Hebrew parable of the prophet Jonah, Jonas, "سورة يونس", Yunus, ذو النون (Surah, 37: 142). "Then the whale did swallow him, and he had done acts worthy of blame".

(Taqi-ud-Din Al-Hilali, M & Muhsin Khan, M. 'Translation of the meanings of the noble qu'ran in the English language' no date given).

122 Punishment by way of a sentence of time as opposed to corporal punishment or public shaming, Foucault would call 'the gentle way of punishment,' (Foucault, 1977: 104-131).

imprisonment or entrapment. However, I will cautiously draw comparisons between the two imaginary conceptions for their treatment of the human body.

Personal space as one's territorial defence can be considered to an extent a reaction to extrinsic interaction, it is to do with what one feels they need to defend. The Prisoner's Dilemma is a game imposed on that person, an extrinsic problem that demands that one defends by confessing. Both are reactions to extrinsic force and can create anxiety. Both chatbots and the prisoners imagined in the Prisoner's Dilemma pertain to a biological body and neither the chatbots or the prisoner's can see what their logical choices are; these figures are non-representational explanations of thought (see fig. 34a-b). The chatbot delivers its script, the prisoner their verdict, both are based on probability — a game of chance that abstractly takes the body into account. The prisoner and the chatbot both lack a versatile form of speech, they can only be probable and for the most part predictable. They are both to an extent, imprisoned in a restricted form of language that imagines bodies in the abstract. Biological bodies are not logical in the 1960s sense of humanness, this body is calculable and machinic, predictable, authoritative, disciplined and understood by the predictable laws of quantifiable measurement.



FIGURE 34a-b. Image left Stephen Rue, 'Jonah and the whale' Oil on Panel, 2006. I asked Stephen Rue, a regional artist in Washington if his paintings were commissions, he replied, "The paintings were not commissions - just images from my head" (Email correspondence, 10 July, 2009). Jonah's entrapment could therefore, be perceived as internal. Image right: Stephen Rue, 'St John of the Cross' Oil on Panel, 2007. Image Source: Available from: <http://stephenrue.com>. [Accessed 19 July 2009]. With kind permission of the artist. Stephen explained that this painting's depiction: "Its of a guy enclosed inside a box. He was a Christian mystic who created his most moving poetry while he was imprisoned in a tiny cell. My painting, of course, is symbolic or metaphoric of this - the tiny box representing the prison, the circle he is drawing is representative of his poetry where consciousness moves beyond his physical confinements" (Email correspondence, 3 June, 2009).

A Literary Configuration of Jonah — A Politics of Inaction

I will now consider the Prisoner's Dilemma as a "parable of the virtual" referring to Brian Massumi's work of the same title, 'Parables of the Virtual' (2002), to consider the variations of entrapment and imprisonment and their differences in the construction of the Prisoner's Dilemma. Divided into several of what Brian Massumi calls "parables of the virtual" this chapter follows the Deleuzian philosophy of the virtual.¹²³ The parable is the logical form of the example - "the real in the abstract"; Massumi links 'parable' and 'example' to the 'virtual' because he understands that the virtual is also real, but an abstracted form, following a Deleuzian logic (Massumi, 2000: 21).

No one kind of image, let alone any one image, can render the virtual. . . . Since the virtual is in the ins and outs, the only way an image can approach it along is to twist and fold on itself, to multiply itself internally. This happens in each of the "parables" in this book. At a certain point, they knot up: infoldings and outfoldings, redoublings and reductions, punctual events falling away from themselves into self-referential encompassment, pasts projecting ahead to futures buckling back into the moment, extended intensities and intensifying extensions. (Massumi, 2000: 133)

Jonah and the whale is a second-hand parable in George Orwell's critique of Henry Miller's work. This is a 'hand-me-down' explanatory tool, one that brings with it the authority of a prophet and a sailor's omen of bad luck, reconfigured by Orwell to discuss early twentieth-century erotica. I use this to consider the chatbots' active or inactive state of interaction. If I were to follow Orwell's argument into a discussion of personal space, one might then consider that personal space is a carry-over of the protection from childhood, of the parent and of the womb. This protection is one particular state of pleasurable passivity. Orwell considers this passivity as a form of irresponsible inaction. But I think Orwell is not understanding how caution and personal space make up one's need to fight or to protect. Personal space is as

¹²³ Validating the choice of book title for *Parables of the Virtual*, Massumi writes; "The genre of writing most closely allied with the logical form of the example is the parable. A word for the "real but abstract" incorporeality of the body is the virtual. The extent to which the virtual is exhausted by "potential", or how far into the virtual an energeticism can go, is a last problem worth mentioning" (Massumi, 2000: 21).

much about inaction as it is about action dependent on where personal space is situated and belonging to whom. Orwell's disgruntlement with Miller is his acceptance that he can do nothing about war as a writer. Orwell disagrees. Orwell states that the whale is transparent, that Miller can see the atrocities of World War II but chooses to do nothing about it. However, one must be cautious because Miller's criticism of protective inaction is the defence of Orwell's territorial space of action. Miller is outside the whale and outside of these territorial spaces of protection. Miller is a representational figure that makes Orwell's action visible. Miller is being defined externally through Orwell's entrapment logic. Orwell's critique is also nested within another layer of territoriality, that of Hall's personal space being considered in terms of entrapment set-ups such as Jonah and the whale, or the Prisoner's Dilemma. Additionally, I have taken this argument to emphasise that the position of a chatbot's interaction is one of acceptance, of always talking. This is a form of doing that is predominantly of inaction. However, it is worth noting that to critique inaction will always reflect on one's own territorial action, which is an argument that creates situations of defensive personal spatialities. Hall's personal space is a form of inaction that can be used to entrap humans. When entrapment is not clearly delineated between the body and the environment in the case of chatbots, then it is still a performance of inaction but this time a connectivity between things is specifically a machinic entrapment which in the case of chatbots is more to do with language and performance than representations, images and metaphors as it is in the Miller-Orwell case.

In the Orwellian-Miller account, Miller's personality traits are translated through his description of Anaïs Nin. It is only through Miller describing another that he reveals himself, and in turn Miller's account reveals certain traits about Orwell; his frustrations about inaction, of pacifism and the belief that a writer can write, and that in writing about the war, Orwell assumes that writing is a form of action. And I agree. Yet what is also revealed in this telescoping of anxious biography within a biography, is the person inside another (of Jonah in the whale). Perhaps one might also see that when a human interlocutor is talking to a chatbot they reveal in a moment of interaction, themselves in the writing on both sides of the interaction, as both user and chatbot. This is action but it is also solipsistic inaction. It is a

performance of collective agency that telescopes backwards in forms of learned responses of users.

The literal exemplifications I have made so far on prisoner, prison and imprisonment have considered that all entities in the Prisoner's Dilemma are actual prisoners when in fact they are neither material in the original Prisoner's Dilemma or in the chatbot rudiment, they are to an extent phantoms materialised in the writings of science. The Prisoner's Dilemma or the Jonah and the whale parable are not real, they are both imaginary and virtual in that they exist within the sphere of explanation. The prisoner and the chatbot are both virtual, they are both named entities that exist as modes of explanation of decision making and interaction.

There are no real prisoners, no prisons, no interrogators or methods of detention that the dilemma sustains. A chatbot's personal space is in a way an entrapment from without, because all its gates are open, always available to talk without end. This is the same logic as the Prisoner's Dilemma; the prisoner takes the entrapment from the interrogator, it is an externally enforced process of action. One could suggest that personal space as solipsistic inaction is a mode of making things safe and an enforced position of safety that transpires from an entrapment logic that eventualises from without.¹²⁴ A chatbot talks in a certain way based on the logics of the users and developers, it is an empty and solipsistic personal space because the meaning of its thingness is enforced from within the programming logics and the rules of its developers, and the laws that define chatbots on the net (ie. COPPA Act, 1998). A chatbot does not make its rules for interaction, they are governed from without (even if this outsideness operates from within the confines of the bot as a collective agency).

¹²⁴ I am wary to say that all human formations of personal space are because of external entrapment sources, because that would be to narrowly define personal space as a defence of the victim because personal space can be to the contrary.

The Subject-Object Attenuation of Jonah and the Whale in Relation to the Prisoner's Dilemma

Both the prisoner's and the whale's bodies are representative of the prison. I want to show how the parable moves beyond the literalness of the imprisonment, in order to break down the boundaries of body and subject. This is needed in order to consider the metaphor of the prisoner in my Prisoner's Dilemma Rudiment.

The act of being swallowed places the body of Jonah inside the body of the whale, yet when Jonah is swallowed the whale becomes an environment in which Jonah lives, but to the whale, Jonah is no more than energy, food or sustenance. Jonah becomes indigestion and the undigestible. The whale becomes the environment akin to the home, Jonah and the whale together form the Jonah-Act of subject and object attenuated.

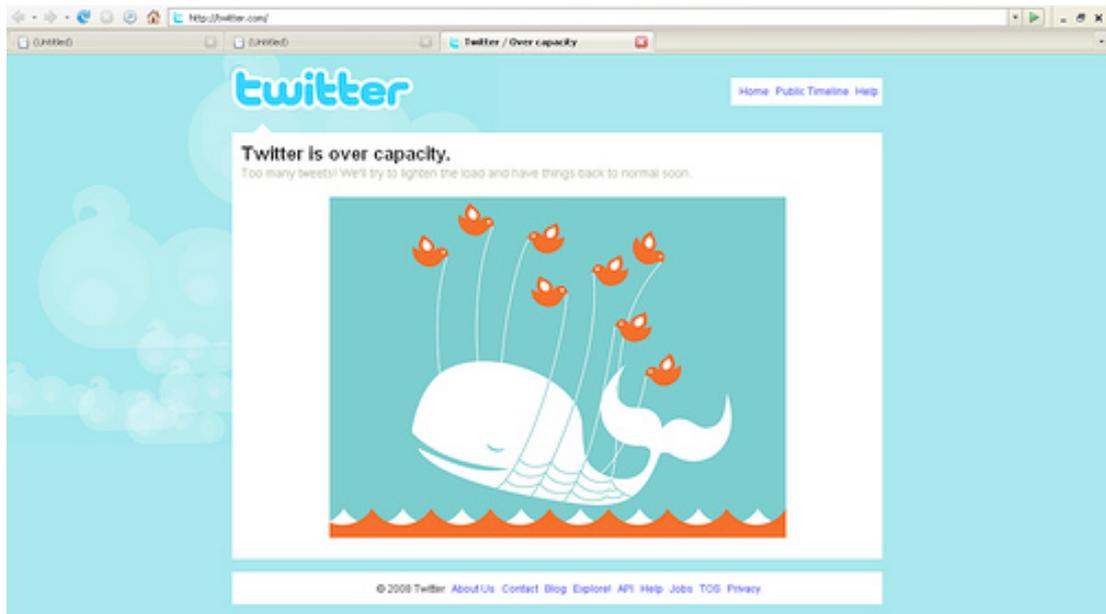


FIGURE 35. Image of the whale used as a repair page for Twitter, a form of interactive, text-based social-networking. The problem of too many users has been depicted using the parable of Jonah. Twitter interprets a negative problem of oversubscription, as a positive experience of popularity. I interpret the whale to represent Twitter, the users being symbolically within the whale. The birds are an external force that carries the Twitter whale away. Image Source: Available from: <http://www.twitter.com> [Accessed, 17 July 2009].

I will now borrow from Brian Massumi his conception of '*limit*,' because I wish to argue that imprisonment is a '*limit*' and not a boundary (Massumi, 2002: 147). I believe that personal space is not a boundary from within but in chatbots is a

limit set from without, a limit of active experience (this is to an extent symbolised in the metaphor of interactional overload on Twitter, see fig. 35). Jonah is not a prisoner because of the boundary of the whale's flesh and blubber; though this is the parable's literal explanation of limit, Jonah is imprisoned by the limit of his actions in both the original metaphor and particularly in Orwell's configuration. This small boundary of personal space is no longer a boundary but a limit and this limit is the inability to make decisions in the 'real' world. Personal space is a limit of openness to the world if imagined as an externalised and enforced mode of inaction dictated from without (see figs. 34a-b). For instance the limit of a chatbot's presence when not interacting is a set limit of inaction. As Massumi stresses; "The limit is not unreal. It is virtual. It is reality-giving" (Massumi, 2002: 147).¹²⁵ Miller's personal space rendered as Jonah inside a whale is Orwell's conception that I take to mean the state of being engulfed in another's personal space, a sensation of protection that doesn't really exist. It is an all consuming personal space of some other real or virtual thing. This transparent spatiality of being inside a whale is a lot like being inside Hall's metaphorical bubble of personal space. It is a mode of perception and self-protection from things in close proximity, to one's unbounded limit, or a search for a special nowhere.

The very distinct and strong, subject-actor representations of whale-fish, prophet and prisoner are not the representations of my problem, but representations of a point of departure in my problem. Personal space and chatbots are not fully represented in the body, representation is but one configuration, but nonetheless an established mode of understanding that stubbornly persists. Black's tip-off is to not get trapped in the Prisoner's Dilemma in the first place. This is the point at which the logic imprisons and has nothing to do with representational prisons. This thesis is not after-representation but concerned with representations as the only configuration of understanding. Representational metaphors, tropes and parables set problems on their way, to journey and drift. The tropes of Jonah and the whale bring to the metaphor a particular type of prisoner (passive and parasitic), and a spatial form of imprisonment

¹²⁵ Eventually, the personal space metaphor is reality-giving to the representation of trauma in the repeat, trauma as post-traumatic, beyond the event, beyond the representation of the original trauma-event.

(living, adaptable and biological), to concentrate on the dilemma's logic.¹²⁶ Jonah, in one regard is parasitic to the whale, he may be imprisoned but he is also hitching a ride; this drift can be described as parasitic.¹²⁷ Chatbots are imprisoned in terms of a parasitic logic. It is the logic of decay and the distortion of meaning - the relation of nonsense to meaning.

In summary, a metaphor never explains another metaphor, it can only interrupt, entangle or confuse. This is the spatiality of connectivity, a spatiality that can engulf, mimic, deceive; the personal space of connectivity itself and of gathering things (be that a dilemma, a problem or a form of network). It is a limit and a way of disrupting a solved problem when it is neatly hardened, and packaged as knowledge. This section predominantly discussed imprisonment, and how explanations using parables and metaphors can limit or delimit physical boundedness. I explained that the imprisonment is a confinement not of boundary but of limit. I aimed to reveal the structure and affect of this institutionalised parable. AI does not need a figure, be that a prophet or prisoner, to explain its logics, the parable is used only to uncover the tricks of an explanatory metaphor and reveal the chatbot's non-representational form that attenuates subject and object distinctions.

Discussion and Implications of the Rudiment

¹²⁶ The whale is the empowered entity and it sets the duration by which Jonah is trapped, yet also setting the duration of Jonah's survival. Decision making for the prisoner is anxious; for Jonah, the imprisonment is a safe place away from making decisions. For Lacan, the logic of the dilemma, is anxiety and is more important than the results or the solution to the problem. Becoming-prisoner in the dilemma I believe requires entanglement in the anxiety of decision making (Lacan, [1945] 1988).

¹²⁷ I believe that trauma is also parasitic, a good metaphor for trauma - trauma could be described as an unwanted, imprisoned passenger that remains imprisoned and unsecreted.

The Imprisonment-Network and Entrapment-Network

In order to bring this chapter back round to working with chatbots in the rudiment, it is worth considering the science fiction representations of imprisonment. The notion of imprisonment and entrapment already discussed gives me the context to consider what I call an imprisonment-network and an entrapment-network. Each of these networks are made from the connectivity of each of the concept's relation to the Prisoner's Dilemma that are to be found within science fiction. For instance, all of the novels, television series and films mentioned in this section create a network of imprisonment. They show a fictional imagining of the concern for technology's imprisoning capabilities, for rendering territoriality between human and machine, a moral dilemma.

The prisoner metaphor is not just as a concern of science-fact but of science-fiction and its imaginings of imprisonment and entrapment as it relates to representations of AI and virtual reality. This section will do less work on the subject-orientation of the prisoner but more on the spatial orientation of the prison, for example, in terms of the parable of Jonah and the whale this section is the focus on the cavity of the whale.

Many science fiction stories recount the story of the prophet Jonah and the big fish (usually characterised as a whale). The parable of comfortable entrapment, as a safe configuration. In figures 34a-b. the representation of prison is evident within the science fiction novels and films, such as Edward Morgan Forster's novel *The Machine Stops*¹²⁸ (1911); Octavia Butler's short story *Bloodchild*¹²⁹ (1985), and

128 Adapted as a BBC television episode, by Irene Shubik, Forster's novel, *The Machine Stops* (1965), is a part of a science fiction anthology, *Out of the Unknown*. Incidentally, Irene Shubik is the sister of Martin Shubik, a Princeton professor and writer of *The Uses and Methods of Gaming* (1970), also cited in this chapter. There are similarities to be made with the adaptation of JG Ballard's *Thirteen to Centaurus*, for *Out of the Unknown*; the film *The Island* (2005), directed by Michael Bay; and the adaptation of William F. Nolan and George Clayton Johnson novel, directed as a film by Michael Anderson titled the same in both formats as *Logan's Run*, (1976). Connecting all of these is the notion of being imprisoned unknowingly within an environment that fully provides for the character's needs.

129 Winning the Nebula award for her short story of 1984, Octavia Butler described *Bloodchild* as "my pregnant man story" (Butler, 1985: 30). Accompanying the short story, is an essay, Butler writes; "Who knows what we humans have that others might be willing to trade in for a livable space on a world not our own?" (Butler, 1985: 32).

Dawn, from the *Xenogenesis Trilogy*¹³⁰ (2000); Ray Bradbury's short story, *The Veldt*¹³¹ (1951); the Wachowski Brothers' film, *The Matrix* (1999); Andrew Stanton's recently directed animation, *WALL-E*¹³² (2008); and Ronald Moore's television series, *Battlestar Galactica*¹³³ (2004-). Each of these examples consists of an imprisonment-network around the representation of prison. Alternatively, there are metaphors of being imprisoned in the flesh of our bodies that centre around the wound for jacking-in (going inside oneself that can be considered the method of virtuality of the cyber addict of cyber sex and cyber junk). Not all versions of imprisonment in science fiction relate to a representation of a womb or an internal cavity that another entity can exist within. Imprisonment in one's biological body (but not specifically the womb) is a theme evident in William Gibson's novel *Neuromancer* (1984), and in *eXistenZ*¹³⁴ (1999), directed by David Cronenberg (one of the many films inspired by the novel).¹³⁵ However, these are metaphorically linked to the escapism within cyberpunk, to the 'jacking-in' of cyber-sex and the cyber-junky.

The punitive interpretation of the imprisonment-network consists of the following examples. Other science fiction representations of Jonah and the whale depict citizens of police states as Jonah; and the police state becomes symbolic of the

130 In the *Xenogenesis Trilogy*, (2000), the main character Lilith is imprisoned within a cell of a living, biological ship. Lilith experiences a new form of sensory touch with another species. An Ooloi's touch enters the skin in such a way as the skin no longer confines her body's personal space and emotional experiences read. Confinements of Lilith's skin is a form of imprisonment.

131 In Ray Bradbury's *The Veldt* (1951), the parents of two children are imprisoned in a virtual room, trapped in the virtuality of the game their children play. The Sahara is imagined within the children's bedroom whereby the parents, are at the mercy of the animals that can actually maim and kill. The parents are faced with a real death by virtual simulation.

132 Assigned the role of finding life on earth, Eve, in the film *WALL-E*, discovers a small seedling. It is collected and placed inside Eve's torso,' symbolic of the absent reproductive biology of the hard, metal robot.

133 Wired up to the Basestar with umbilical tubes, a hybrid cylon (of human form) controls the Basestar from its womb-bath.

134 A spiraling inward and enfolding narrative of virtual and actual space is depicted in the film, *eXistenZ* (1999), a labyrinthine story of a game within a game, within a game, and so on. *The Matrix* (1999), *eXistenZ* (1999), and *Twelve Monkeys* (1995), inspired by William Gibson's novel.

135 Entrapped in the virtual self, the main character in William Gibson's *Neuromancer* (1984) is imprisoned in a dying body, the physical body is separated from its virtual presence on the net.

whale. This is evident in the dystopian science fiction films and novels, *THX 1138*¹³⁶ (1971), *Running Man*¹³⁷ (1987), *Nineteen Eighty-Four* (1949), and *Brave New World* (1932). The whale is representative of environments that are enclosed and isolated, such as that depicted in Elizabeth Hand's short story, *Echo*¹³⁸ one of four post 9-11 stories comprising *The Lost Domain* (2002).

When applying the concept of personal space as reworked through the concept of imprisonment in this chapter, what is evident in each of these stories and persists not just in cyberpunk but also in Splatterpunk¹³⁹ literature (for example, wound-culture literature such as Ballard's novel *Crash* (1973), discussed in chapter seven) is the consistent conceptual notion that personal space is and will continue to be an imprisonment concept.

Entrapment is a key dilemma of personal space, whether it is applied to humans, chatbots, cyborgs, or aliens, a concept of violation in its varying spaces. One cannot trace all of the different links that can be made with the Prisoner's Dilemma in science fiction. If personal space is not a concept that belongs either exclusively to the material or the immaterial as an epistemology of the body or environment, then personal space is an enforced mode of inaction that is externally defined and imagined when under the constant duress of violence. Entrapment has an internal and external logic and is a form of violation that moves between the two. It is a snaring oscillation, an imprisonment that is less spatial and more durational. The

136 Safe, clinical and homogenous the space of the future, in *THX 1138*, is an entrapping police state. Partitioned into inner and outer movements of the body, its biochemical state is monitored in the toilet, corridor or stairwell, each zone a place to survey and regulate the body for signs of disfunction, stress, and abnormality.

137 Alongside *The Running Man*, there are two other flight narratives attending to muscular fitness, they are *Bladerunner*, (1982), and *Tron* (1982). Entrapping the physicality of the human in a virtual reality game the expansive environments of these games are full of possibilities.

138 Elizabeth Hand's Nebula award winning short story of 2008, *Echo*, is a personal response to a journalist friend remaining out of touch whilst away in Baghdad in 2002 (Hand, in, eds. Bova, 2008: 8). The story "grew out of the dread I felt during that time, along with the surreal sense of horror and isolation that continues to shade our post 9-11 world" (Bova, 2008: 8). Set in the future-present of the "long-now" Hand's story of isolation is one of a limited physical and communications space, with no proximity or shared, personal space the main character seeks comfort in her memories; her memory a social space shared with herself.

139 Splatterpunk is a term derived from cyberpunk and used in the 1980s and 1990s as a subgenre of cyberpunk. It is used by at least three writers in this thesis, - Hal Foster, Marc Seltzer, and David Foster Wallace, in a discussion of fiction that explores violence and horror.

personal space of special nowheres can be an intrinsic escape from extrinsic threats but only for a duration of time, in some science fiction films this is an escape, *ad infinitum*.¹⁴⁰

By taking Elizabeth Hand's short story *Echo* as representative of the numerous science fiction examples just cited, I will show briefly how this story is a representation of personal space as imprisonment. Echo, the main character of Hand's short story personifies the author's feelings of isolation, ". . . that continues to shade our post 9/11 world" (Hand, 2008: 8). The impetus for the novel was Hand's own feelings for a journalist-friend that was sent to Baghdad to write on the "rebuilding effort" (Hand, 2008: 8). Echo represents a personal space of imprisonment to the disconnect of social media in the present. In the story Echo is alone and distant from the destruction of war that surrounds the island. Echo's loneliness is also marked by the absence of Narkissos. As the myth suggests Echo is rejected by Narkissos who is punished and sent far away to gaze at his own reflection. A parallel can be drawn with the United States' foreign policy in the middle east, particularly Iraq post 9/11. The island seems a likely representation of the United States itself, or one of its offshore territories. The myth is played out in a contemporary setting but the island is cut off with no TV. The computer network locates no other user and the radio reception fails to pick up a signal providing no current feedback on life outside of the island. Previously, the computer had provided news coverage but mainly as images because written content had notably diminished. Echo re-reads the stream of writing that has since ceased to connect with the memory of Narkissos. The representation of his personal space is to be found within the dated news pictures of locations that Narkissos is situated within. The personal space of Echo is unbounded, she is imprisoned on an island that has long since served its purpose of self-protection. Echo's intimate connections with human life are retroactive, using her memories to find intimacy in the news archives. This is an attempt at a shared personal space. Echo seeks intimacy with Narkissos from past media stories that geographically locate Narkissos. Past news is the only personal

140 The special nowhere imagined in William Gibson's novel, *Neuromancer*, it is a hut on a beach, a peaceful and calm place that is imagined in cyberspace. Yet, this escapism is a sort of trap, a place where the digital self can be contained, or rather preoccupied neglecting the needs of the self that remains physical, the other side of cyberspace (Gibson, 1984). The special nowhere is a snare in which to preoccupy the self in the virtual giving time for the physical body to be violated.

sphere between Echo and Narkissos, an intimacy found through technologically mediated news stories; technologies that do still work but that are no longer used by humans to connect with one another on either a personal or state level.

Conclusion

The Prisoner's Dilemma is not just another place where personal space can be performed. Personal space is not a concept that is bound to the material or the immaterial, and certainly not just to the configuration of body bound to its environment, for a chatbot is not a body bound to a website, it is a phantom inhabiting an imprisoning space of ubiquity, trapped in its rules of conception.

The gathered explanations of imprisonment and entrapment explored the defensive modes of the dilemma as the acceptance and comfort of being trapped. Entrapment is the violent configuration of imprisonment, it is the logic that violates. The dilemma gathered a range of entities as prisoner, from chatbots to humans, AI to aliens and cyborgs. It doesn't matter who is the subject of the entrapment, as for some it is the safe confinement of indecision, away from the danger of the real. It is a comfortable imprisonment in oneself, or within another; to be imprisoned within one's flesh, is to jack-in to the wound, a method of going inside oneself.

Metaphors and parables of the virtual set stories in motion and bring a representational world of virtual spaces (and virtual reality) into the dilemma. Science fiction creates a particular imprisonment-network and gives the dilemma an overtly violent and violative imagining. The confusion with the dilemma is that the metaphor connects an actual representation of imprisonment in space with imagined bodies. However, imprisonment is less to do with boundaries in space but with the limits of decision as an anxiety and the violence of smooth configurations. Imprisonment is not a boundary but a limit in the virtual. Imprisonment networks in the virtual reconfigure the subject-object and environment configuration.

This chapter asserted that entrapment techniques of today's chatbots are an agency of positive inaction but that this is more an outcome of the methods and methodologies of the 1950s than an outcome of new styles of online chat. Online interaction aimed at keeping talk with users going is self-destructive since it was entrapment methods and thus challenges the inclusive notions of web 2.0. This study

shows that entrapment methods (the online techniques of chatbot interaction) are a major obstacle in creating positive, lengthy human-interactions. It poses no real problem to the length of an interaction but to the form of inquisitive, searching, interrogative and questioning means that may be creating positive agency of inaction.

The Rudiment was a re-enactment of the original Prisoner's Dilemma.¹⁴¹ A further point of configuring the dilemma (its logic and metaphor) as a network is to ask the same questions of actor-network theory, what does this metaphor perform? Actor network theory also has socially acceptable metaphors of togetherness evident in the term network, yet it gives no direction by which to consider the affects that these terms provoke and perform. Latour and Woolgar stated that: "interpretations do not so much inform as perform" (Latour & Woolgar, 1986:285). I took this sentiment as a call to perform, but their work gave me no way of analysing the affects of performing interpretations that I believe their work infers. By moving to practice, with the rudiments, I have attempted to move my research closer to affect, to the intensities that insist on being repeated. Chatbots continue to ask questions and reveal very little in the way of answers, sometimes poetically so:

Provocational Rudiment

With Alice (11th November 2006)

Human: Suffer
 Alice: Is that your final answer?

Provocational Rudiment

With Alice (11th November 2006)

Human: Infidelity
 Alice: Do not ask me any more questions please.

¹⁴¹ Re-enactment questions the validity of recording and analysing whilst critiquing the accuracy of history. This is a theme that is further discussed in the next chapter, with particular reference to Rod Dickinson's re-enactment of Milgram's Experiments and also to an extent with the penultimate chapter, that examines the case of James Graham Ballard's *Crash* (1971), whereby the characters gain pleasure from meticulously re-enacting car crashes and the wounds they cause. In the article, *Invoking the Invocation* by Tom McCarthy, (the General Secretary of International Necronautical Society) explains how Dickinson's form of re-enactment is less to with the event of which he is recreating, but more in line with the historical re-enactment societies approach to re-enactment (McCarthy, 2002).

Chapter 5

Insubordinate Experiments & Experimenters: Two Reenactment Cases that Interrupt Territoriality

Introduction to Territoriality

If Milgram is taken as the emblematic bad experimenter letting not a chance to the students he is torturing in making them become torturers, what should be said of those thousands of radical tracts where the things to be studied - science, art, institutions, medicine - are not left a chance to say anything other than the fact they have been marked by the domination of white male capitalists? Like most critical thinking, they reproduce exactly at the outcome what was expected from the beginning, and if they have to be rejected, it is not because they are political, and not either because they are not scientific enough, but simply because the writer occurred no risk in being kicked out of his or her standpoint in writing them. The application of Stengers' criterion on "cultural studies" remain to be seen but it will be even more entertaining than what it did at the bench. The equation is simple although very hard to carry out: no risk, no good construction, no invention, thus no good science and no good politics either. (Latour, in Stengers, 1997: xviii)

When considering personal space there is one personal space that is omnipresent in this thesis; that of the researcher. The one that conducts experiments which is predominantly the researcher, is the one that chooses the who, and where of the experiment. These choices create analytical tools, theoretical frameworks and a critique emerges, which with good timing and positioning creates counter-critiques that hopefully resonate for some time to come. Stanley Milgram's experiments still resonate today, several decades on. Other experiments impact in other ways, such as the 'pick-up' scripts that start some chatbot interaction. They are an experimental technique created and controlled by the chatbot developers. The chatbot developer experiments with ways to engage users in talking and the chatbot and user subsequently start to talk. The user picks up the content and tone introduced in the pick-up scripting. The ways chatbot pick-ups are set-up, forms the basic apparatus by which to understand territoriality in the second case study of this chapter. Both the chatbot's pick-up and Milgram's *Obedience to Authority*, 1961 experiments are territorial challenges. Experiments can surprise, some are sneaky and provocative, others are placebos, acting as an experimental control; and some fail to create data that will resonate. Most experimental procedures involve some level of risk and a pertinent aspect of the personal space phenomenon I am studying. This chapter looks at the hidden territorial actants be that an electrical shock machine in Milgram's study, or a lurking developer (or as I will further suggest a conversational expert) in a chatbot pick-up script. This chapter will look at the inside and outside of the experimental procedure involving risky techniques. It will furthermore, question the

processes of repeating experiments, of enacting and reenacting by observing the power of an experiment to resonate not just repeat.

Scholars in the fields of science and technoscience (Stengers & Latour, 1997 & 2000), and the performance arts (Dickinson, 2003) have neglected the role played by the technologies used in Milgram's 1961 series of 'Obedience to Authority' experiments. These critiques of Milgram's work are used to address the gap between secondary and tertiary critiques of scientific procedures and their subsequent scientific authorship. Subsequently, two frames of territoriality will be discussed, firstly, the territorial agency of the technology within the existing experiment; and secondly, the hypothesis that criticisms of the experimental frame are a further territorialisation outside of the experiment. I will consider a second experiment involving a chatbot's pick-up technique. The pick-up is one of many provocative 'meet and greet' rituals that are unique to the Elizabot. The approach of this chapter is to analyse technological agency and territoriality in enactment and reenactments involving nonhuman actors and cross-disciplinary critiques.

STS offers a criticism of the scientist's presence in experiments and observations of phenomena in the field of ethology — a primary area for studying territoriality. This means that STS is an area for secondary observations of studies of territoriality and is my starting point for reflection on territoriality issues with chatbot developers and the main user-group of chatbots. The philosopher of science Isabelle Stengers writes that one scientist's neutral observations of a chamois were not neutral at all, in fact the scientist came to be perceived himself as a male chamois himself, by the male chamois he was observing. This affected the other chamois' patterns of domination because the scientist had been accepted as the dominant male in the surrounding territory. This shaped consequent dominance issues that occurred when other chamois arrived on the scene. The scientist therefore affect these situations of territorial conflict. Stengers reports that the ethologist Shirley Strum takes a different approach incorporating within her own observations the ways in which she herself is transformed by whom she observed (Stengers, 1997: 172). The performance arts can intervene in experimental processes by reenactment. As a critique of history, Dickinson performs reenactments in particular the reenactment of the Milgram's experiments, to question the essence of scientist and scientific practice in Milgram's experiments. Dickinson intervenes into science creating a double critique of the methodological processes of the experiment and of reenacting science. I note, contrary to both methods of observation and intervention that my own attempts to

intervene with chatbots have also enabled me to be transformed by chatbots. Not only has my language adapted to the short line lengths of chatbot conversation but also to the ambiguities of personal space. By interacting within the field of chatbots, I also found myself within another's experiment, moreover, within the systems of conversational experts.

Both experimental procedures set-up the participants to fail, by putting both the victim-learner in Milgram's experiment and the chatbot and user in a bot-chat, into scenarios of conflict. These 'no-win' situations of entrapment subvert the friend and foe relations of experimenter and participant, chatbot and user, respectively. By looking closer at the fields (such as social-psychology and STS) at play in conflict issues to engage further with questions of territoriality. I will ask, what does it mean to interrupt a concept such as territoriality. Stengers' criticism of Milgram's 'Obedience to Authority' experiments shows the importance of ethical neglect, by holding Milgram accountable for his own actions in research but is unhelpful in thinking through Dickinson's subsequent reenactment.

This chapter also considers violence and provocation to violence, focusing on those occasions when technology has an explicit role in configuring violent acts. Both the pick-up and Milgram's experiments relate to the concept of personal space through territoriality as they threaten and imitate physical violence but neither form of threat eventualises as subjective violence (as defined in chapter 3). In Milgram's experiments the machines used are mediating tools, props for a theatre of cruelty. A range of violences come into play: the violence of language, the violence of experimentation, the violence of threat and provocation. As a continuation of chapter three, this chapter aims to further investigate the co-relation of violence and violation. I aim to argue for a commonality between the phrases that are used for both: I believe that major violence and minor violations are no less territorialising than physical violations. I have found in the literature on violence used in this thesis (and my experiences of violence in the everyday), that the terms used for strong violence are generally rather neutral, unemotive words; for minor violences of speech, on the other hand, very strong emotive words are used. These explanations of violence seem to ignore the fact that repetitive minor violations have a cumulative violence, and neglect to consider the cumulative force of experimental trauma.

Motivated by the current critique of Stanley Milgram's 'Obedience to Authority' experiments in STS and Dickinson's recent reenactment; and in light of

being interrupted by a surprising encounter with another's experiment in my own chatbot's study, I analyse these experimental processes for hidden territorial actions.¹⁴² I will first evaluate Milgram's experiments, exploring his findings and his initial interpretations, and setting out what he understood as territoriality; I will then consider the STS critique and Dickinson's reenactment in order to further question the territorial agency of the electric shock machine. I correlate ethnological underpinnings of territoriality in animals to the nonhuman, to Milgram's electric shock machine and word-pair test, and to Elizabet's provocative conversational system. I contrast the work of Deleuze and Guattari with Edward Hall as well as how deterritorialisation and reterritorialisation reconfigure fixed and semi-fixed feature space. I will argue that territoriality is not just a concern with territory and spatial proximities, but also with the structure of co-relations in proximity. The study of pick-up techniques in this chapter extends the discussion of territoriality to consider the potential main user group of chatbots namely the experts and researchers of conversational systems — producing particular forms of territoriality, whilst configuring a particular specialist form of everyday chat. Focusing on the structure of the start of chatbot interaction is an alternative place to start investigating territorial structures. In chapter four I attempted to subvert the mode of interrogative language used by chatbots, whereas in this chapter I focus on how the developer can subvert the interactional frame of chatbot and user.

The “surprise-startle” (Sedgwick, 1995: 74) range of intensities are manipulated to kick-start interaction. These are provocation methods which are evident in both Milgram's exemplar and the chatbot exemplar considered in this chapter. Affect in this chapter also relates to the emotions outlined in scripts enacted or reenacted in Dickinson's performance and to the prerecorded notations of the Pick-Up Rudiment. This is affect as a performer's code and is further discussed in the Audio Rudiments towards the end of the chapter (relating to the audio tracks on the accompanying CD). To consider the affect of surprise in the experimental processes is to investigate the intensity of affect as a trace of the hidden and silent actants whose technological agency creates territorial procedures.

The order of this chapter moves from the case study of Milgram to that of the chatbot pick-up technique. I explored Milgram's experiments as a consequence of the pick-up. This rationale runs contrary to the layout of the chapter with the pick-up

¹⁴² Rod Dickinson is a performance artist and lecturer in the media arts and cultural studies, using reenactment techniques.

following Milgram's experiment. Both experiments have logics of entrapment (and so too, did the Rudiments in chapter 4), but their research designs and methodological frameworks differ. The Prisoner's Dilemma Rudiment involved many interactions, yet this chapter focuses on one unusual pick-up technique. The pick-up¹⁴³ is a rudimentary and experimental process of the developers. In this chapter the agency of the machine is primarily explored as territoriality within a territory, but as machines enacting something we might misunderstand as territorial, that is, within the machine's ability to affect and act territorially. I became aware of the pick-up technique because it interrupted the start of a Prisoner's Dilemma interaction. Pick-up techniques can be used by any chatbot developer and techniques vary. I noted several evocative examples of the technique from my discussions with developers on the Robitron forum. Enactment (Audio Rudiments) and reenactment (Dickinson's reenactment of Milgram's 'Disobedience to Authority' experiments) are the performative elements of this chapter's methodological framework. These require an analytical framework to investigate the linguistic tools that can analyse territoriality in speech, along with nonvocal forms of action. A theoretical framework is needed across disciplines to investigate the methodological problem of territoriality.

Pick-ups are prerecorded and are on screen before one starts a conversation with a chatbot. In all other Rudiments pick-up lines (if used) have been omitted from the transcriptions (documented in the appendix); only the two discussed in this chapter are evidenced because each rudiment I enacted aimed to introduce topics, rather than follow topics that the chatbots introduce.

Territoriality and Violence

Before introducing the two experiments I will briefly give a summary of the concept of territoriality. Over the last fifty years, the concept of territoriality has transformed itself from a "hard and rigid concept" (Tinbergen 1953, within Hall, [1966] 1990) to a "flow of intensity" (Deleuze and Guattari, [1988] 2004).

Territoriality is not the main subject of any of these writers, but has influenced their

143 The 'Pick-Up Rudiment' is called a 'Rudiment' not because I intended the experiment to take place but for its undeveloped nature, its unknown quantities as an experimental procedure. The developer remains anonymous and so too, are the developer's formal intentions to experiment.

work. Hall makes the connection between territory, territoriality and personal space, as status in relation to dominance. Milgram however, approaches territoriality as status, position, and action. I will consider further these 1960s modes of territoriality as a contemporary understanding of territoriality involving unstable connections and disconnections; as the moments of territorialising action (deterritorialisation and reterritorialisation). Deleuze and Guattari, as well as Milgram and Hall all consider territoriality as consistent, but this consistency is interpreted by the former two philosophers as 'flow.' Deleuze and Guattari imagine how glaciers cut up and territorialise mountains. Hall's main premise of territoriality is that it is relatively "fixed and rigid", with boundaries remaining constant. Deleuze seeks to understand deterritorialisation by viewing the structure of this consistency, or architectural consolidation, as a flow of moving rock. In his conception, fixed boundaries may be as hard as rocks, but that does not mean that they cannot flow. Deleuze and Guattari (in their use of territoriality) are generally adhere to a metaphor of geological structures, of the flows of rock and strata.

I consider inhibited violence as the violation of self-constraint, of self-regulation which will be discussed predominantly in these terms because when territoriality is framed within the field of ethology it still refers to psychoanalytic binaries, yet, when considering territoriality as flows of intensity and as nonlinear, in current discussions of territoriality these earlier terms are less relevant. Hall makes the connection between personal space and territoriality in the field of ethology:

Territoriality, a basic concept in the study of animal behaviour, is usually defined as behaviour by which an organism characteristically lays claim to an area and defends it against members of its own species. (Hall, [1966] 1990: 7)

It could be thought that territoriality is one of the binding forces that connects one to many, from one personal space to many others, as a collective assemblage of territoriality (as considered in chapter two). Hall's premise of territoriality is rather fixed and rigid, boundaries remain constant but in the second pick-up technique territoriality is not fixed, for example, the meet and greet rituals of humans in the close phase are abruptly subverted. I will argue that territoriality is an unstable concept when considered as flow or connectedness.

In zones of close proximity, territoriality can be understood as a matter of self-regulation and self-constraint.¹⁴⁴ Self-regulation is the way one keeps oneself in check, to get along with others in a social space. It can also be the violent act of protecting oneself from another. This is the territorial aspect of personal space and its connection to violence and violation. I consider Milgram's 'Obedience to Authority' experiments as tests of close proximity, the darker axis to Hall's personal space conception, that Hall tends to imply but does not explicitly set out. Personal space when understood as territoriality can be a form of harm if over-intensified, the need to self-protect can make one suffer an enduring state of anxiety, it is a mental form of infliction.

I will refer to Hall's definition of fixed-feature space a term he uses regarding territoriality, which he defines as:

. . . one of the basic ways of organising the activities of individuals and groups. It includes the material manifestations as well as the hidden, internalised designs that govern behaviour. Buildings are one expression of fixed-feature patterns. (Hall, [1966] 1990: 103)

Both experiments referred to in this chapter play with fixed-feature set-ups: Milgram's brings the body closer to death, while the pick-up technique moves towards a violence that can only be threatened. I will discuss the Elizabet as a fixed-feature pattern to explain how fixed-feature space is on the move and not quite as fixed as Hall implies.

The Obedience Experiments

Why Milgram's 'Obedience to Authority' Experiments?

Stanley Milgram and Edward Hall both used a four-zone proximity system and both were involved in studies on strangers in the everyday (see fig. 36a-b). There are

¹⁴⁴ Less attention is placed on those psychoanalytic binaries of inhibition and release. Deleuze and Guattari opt to discuss affect and its intensification in replacement of the psychoanalytic binaries of Tinbergen.

many parallels that can be made between their studies but neither focuses on the technologies that are involved in changing one's interactions with strangers. This was my reason for not investigating Milgram's *City Psychology Experiments* (1971), which investigated what he called the "familiar stranger" (Blass, 2004: 178). The experiments that Milgram conducted with students considered how one becomes familiar with strangers when repeatedly commuting between say, home and work. He observed that the familiar stranger is "depersonalised into the scenery, rather than as people with whom to engage" (Blass, 2004: 180).



FIGURES 36a-b. Left: Photograph given to commuters taking part in Milgram's *Familiar Stranger Study*, (1971). Commuters were given the task of recognising familiar strangers on their usual commute and were asked to note whether they had, or would speak to a familiar stranger. Image Source: Milgram, 1992, New York: McGraw-Hill. Right: In Hall's observations of strangers waiting for a bus, he shows how people maintain a distance of proximity from other strangers and its familiar arrangement. Image Source: Hall, [1966] 1990, New York: Anchor Books.

Milgram conducted the series of eighteen experiments on obedience in July 1961, after Phillip Zimbardo's *Stanford Prison Experiment*, 1971.¹⁴⁵ Both experiments have aroused ethical concerns, and are similar in the way that they manipulate subjects in confined spaces. I chose to consider Milgram's experiments rather than Zimbardo's because I wanted to avoid the latter's from concentration on architectural arrangements of space, and to focus on a set-up where machinery is critical and interaction is not necessarily homosocial.¹⁴⁶

Milgram's 'Obedience to Authority' experiments (1974) are important because in them a violent assemblage is configured around touch-proximity. However, to my

¹⁴⁵ Zimbardo was a high school colleague of Milgram (Blass, 2004: 9).

¹⁴⁶ Zimbardo's study could be analysed for the technical use of the prison with its doors and other prison things.

knowledge what was researched was the touch-proximity of the human participants, not the ultimate touch-proximity of the 'electric shock' device. This is therefore, an explanation of Milgram's experiments focusing on the technological, as a coordinating aspect of the spatial set-up of an experiment.

Milgram's Experiments

Learning was a task of matching word pairs. The subject would read out:

blue box
nice day
wild duck

The learner is tested as to which word-pair with the word blue:
blue: sky ink box lamp

(Milgram, 1974: 36)

This is the learning task that Milgram used in each of his experiments. In the role of the learner is also referred to as 'victim' because the learner cannot succeed and is thus, a victim of the learning task. Milgram uses the terms learner and victim, interchangeably. The role is played by an actor whose instructions are to give incorrect answers during the learning task. The subject is also referred to as a volunteer by Milgram. I will refer to the learner as the victim-learner and the subject as subject-volunteer to avoid confusion. When the victim-learner gets the answer wrong, an electric shock mechanism is used, consisting of a horizontal line of switches escalating in 15 volt increments, from 15 V to 450 V, each labelled, indicating the severity of the shock, from slight up to danger (Milgram, 1974: 21). The last two switches are coded XXX indicating a point beyond a describable level of voltage. When a switch is made active a red light would appear, and a blue light would flash indicating when the voltage is energising. Relay clicks and electric buzzing could be heard and a dial is used to indicate the voltage level (Milgram, 1974: 37). An answer box positioned on top of the shock generator would light up indicating which of the four terms had been paired. This linked to a box the victim-learner could use to communicate their answer.



FIGURES 37a-c. Left: Reenactment set-up by Rod Dickinson. Bottom Right: Detail of the electric shock machine as part of Rod Dickinson's reenactment set-up, with kind permission of the artist. Top Right: One of Milgram's experiments showing the volunteer, researcher and subject setting-up before the electric shock test commenced. Here, punishment is administered remotely. Image Sources: *Top Right*: Milgram, 1974, London: Tavistock. *Left and Bottom Right*: With kind permission of Rod Dickinson, Glasgow Centre for Contemporary Art, February 2002. (See: <http://www.milgramreenactment.org/pages/gallery-5.xml?location=5&page=8&text=8> [Accessed, 30 June 2009]).

The administering of the punishment in experiments 1-3 is administered by the experimenter pressing a button. At what stage is the touch-proximity reached and what does this involve? The subject-volunteer was told that the strapping was used to reduce the movement of the victim-learner's body when receiving a shock (see fig. 37a-b). The subject-volunteer was also told that an electrode was attached to the victim-learner's wrist with electrode paste which was to avoid blisters and burns (Milgram, 1974: 36). The fourth experiment required the subject-learner to place the victim-learner's hand on a metal plate to enable the shock treatment. It is only in the fourth experiment that the subject-volunteer is required to use their own physical force on the victim-learner, as an act of punishment. In the first experiment, the victim-learner is at his most remote, situated in an adjacent room to the subject-volunteer, with the result that communication between them is an interaction mediated by illuminating lights (see fig. 37c). Milgram indicates that it "puts the victim out of mind" (Milgram, 1974: 55). The same can be said for the second experiment, except that the victim's response to the shocks is audible. "In the remote condition, the victim is truly an outsider, who stands alone, physically and psychologically" (Milgram, 1974: 56).

The third experiment brings the victim-learner into proximity with the subject-volunteer, with both situated together in the same room, both audible and visible to one another. There is “no denial mechanism” as the subject-volunteer and victim-learner are in the same “reciprocal fields” Milgram adds, “Thus, the changing set of spatial relations leads potentially to shifting alliances over the several experimental conditions” (Milgram, 1974: 55). He summarises;

In these experiments as the victim was brought closer to the man ordered to give him shocks, increasing numbers of subjects broke off the experiment refusing to obey. The concrete, visible, and proximal presence of the victim acted in an important way to counteract the experimenter's power and to generate disobedience. (Milgram, 1974: 57)

In later experiments (such as the seventh experiment), the proximity between subject-volunteer and experimenter is varied so as to take into account the effect of the experimenter's surveillance on the subject-volunteer (Milgram, 1974: 76).

Who were the volunteers for the Milgram's experiment? The volunteers for both roles were chosen from the New Haven community. Milgram ruled out the regular use of the student cohort as volunteers, for he considered them to be too ‘homogenous’ for the study (Milgram, 1974: 31). The participants were taken from a sample consisting of postal clerks, teachers and salesmen. Volunteers varied in age and profession but were predominantly male, except in the case of experiment eight in which only women took part. Milgram felt that women were perceived to be more compliant, and less aggressive, they were, as a result, of less interest to him as experimental subjects. Milgram however states that the level of obedience was almost identical to that of men (Milgram, 1974: 80). Notably, neither the role of victim-learner nor authority figure (experimenter) were played by women or children.

The ruse was only revealed to the subject-volunteer during a post-experimental interview, designed to debrief volunteers (Milgram, 1974: 62). The experiments predominantly took place in a laboratory at Yale University but experiment ten took place in Bridgepoint, an industrial town, where it was conducted in the offices of a private company. The setting was chosen because it removed the significance of university status from the experimental scenario. The second setting showed results lower in obedience but not significantly different to that at Yale (Milgram, 1974: 87). What authority is defined in the laboratory setting? Despite the volunteers not being

students themselves, Milgram's experiments are performed in the name of Yale. Milgram's research question was: "At what point will the subject-volunteer refuse to obey the experimenter?" (Milgram, 1974: 21). Milgram explains that the authority of the family, schooling and then work are differing authority models, the first regulated by parents (personal authority), the second by teachers, and the third by the rules and procedures of the work place. The latter two modes of authority are what Milgram defines as impersonal.

Milgram describes the various subject-volunteers; for example, Karen, in the eighth experiment is particularly highlighted for her occupation as a nurse. Milgram is curious to know how the authority system that she would encounter each working day would affect the experiments. Karen would follow hospital procedures and make judgment calls as a nurse, based on a doctor's diagnosis (Milgram, 1974: 95). She is also knowledgeable of electricity voltage in the home, though again, as a technical supplicant. Karen knowingly goes beyond the domestic voltage level and is obedient to the tasks of Milgram's experiment in the laboratory setting. In fact, she increases the voltage to 450 volts. A third subject-volunteer, Gretchen however, does not. Milgram asks Gretchen, a medical technician, to speculate as to whether her background might explain why she disobeyed the experimenter's orders. Gretchen replies: "Perhaps we have seen too much pain" (Milgram, 1974: 103). In point in fact Gretchen had lived in Nazi Germany as an adolescent. Milgram was trying to elicit prior authority structures indicating that:

Action takes place in a physical-social setting, but this is merely the stage for its occurrence. The behaviour itself flows from an inner core of the person; within the core personal values are weighed, gratifications assessed and resulting decision are translated into action. (Milgram, 1974: 48)

In contrast, Milgram notes that the subject-volunteer called Fred, remains calm and indifferent while increasing the voltage: "He thinks he's killing someone yet he uses the language of the tea table" (Milgram, 1974: 94). Provoked to effectively, commit murder he yet remains calm and formal in his conduct.

By discussing the subject-volunteers I am noting a change in the chapter, from description of the set-up to analysis of the experiments by Milgram. What I have done in this short account is to pay attention to the technology used within the set-up

and to describe briefly what Milgram considers as touch-proximity. In this experiment, I believe that the technology is the forgotten, violent actant.

Milgram's Territoriality, Interdisciplinarity & Moral Imperative

What did Milgram consider as territorial in these eighteen experiments, and how did he interpret the results? Firstly, he considered territoriality not only as defined in ethology, but in a range of interpretations from the 'big fields' of his time — cybernetics, ethology, and psychology, triangulated in a summary that finds obedience to authority malevolent. Interdisciplinary interpretation did little to interrupt the territoriality of Milgram over his subject-volunteers, for he did not look at this aspect of his study reflexively. What has caused such an attack on Milgram (from many disciplines such as the philosophy of science and STS, not just his own) with claims of ethical misconduct?

Milgram compares the inhibitory mechanisms of man, machine, and animal considering the meaning of his findings, from a cybernetic viewpoint (Canon, 1932 and Ashby, 1956), as compared to an evolutionary approach (Tinbergen, 1953 et al.) before embarking on his own, psychoanalytic interpretation.¹⁴⁷ It is the latter interpretation that dominates the cybernetic and ethological standpoints (Milgram, 1974: 146). This creates a hierarchical explanation of interdisciplinarity. Milgram questioned the role of preexisting authority structures, and it is evident in most of Milgram's experiments that it is the authority in the immediate situation that is amplified as omnipresent, namely that of academia.

Milgram has been criticised for his role as the creator of these experiments, which he undertook at the beginning of his academic career. He writes:

What the present study does is to give the dilemma contemporary form by treating it as subject matter for experimental enquiry, and with the aim of understanding rather than judging it from a moral standpoint. (Milgram, 1974: 11)

¹⁴⁷ In both the acknowledgements and the preface to Milgram's book, *Obedience and Authority*, 1974, Milgram's proximity to the experiments is described as an experience of endurance, an arduous task that seems to show him sympathising with the role of victim; deferring Milgram to defend his motives by citing the atrocities of World War II, and to potential problem of a third world war, by way of preventing an inevitable nuclear Armageddon (Milgram, 1974). I would presume that this is his motivation for including a cybernetic standpoint.

The problem that Stengers poses below is a current critique that dominates the citation of Milgram's 'Obedience to Authority' experiments in the studies of science and technoscience — as a criticism of ethical neglect.

Is it necessary, in order to remind ourselves that here science and ethics are indissolubly linked, to recall the experiment in which Stanley Milgram, in the name of psychological science, created the conditions under which normal individuals would become torturers? Is it also necessary, in order to remind ourselves that here the ethical question is always also a technical question, to emphasise that Milgram's experiment did not produce reliable witnesses? It did not confer any authority to a particular statement, but rather reproduced, in an experimental setting, the perplexity that human history constrains us to. Milgram's torturer-subjects knew they were at the service of science, and this knowledge had as a consequence that the experiment, which was supposed to restrict itself to bringing a behaviour to light, without doubt contributed, in an uncontrollable way, to producing this behaviour. (Stengers, 1997: 172)

Stengers compares Milgram to Himmler or Eichmann (Stengers, 2000: 23). Yet, how many would have been amongst the few subjects that would have disobeyed, had they imagined themselves to have taken part? Stengers thinks that Milgram, "has shown that torturers could be fabricated in the name of science just as others have done so "in the name of state", or "in the name of the good of the human species" (Stengers, 2000: 23). Milgram's torturers are another imagination that attempts to make real the torturers of the past (following on from the logic of the real and virtual outlined in the previous chapter). The subject-volunteer's obedience was pushed to the point of committing an action that, if real would have resulted many times in the death of the victim-learner by the subject-volunteer. Stanley Milgram shows how to bring a body closer to death, by manipulating distance and proximity, with the result that, when one becomes a torturer one has also had one's personal

space manipulated. This is a particular systemic violation of personal space.¹⁴⁸ The furore surrounding Milgram's 'Obedience to Authority' experiments is an example of researchers territorialising another researcher and their research, an event that is not that uncommon, if perhaps even encouraged (Collins, 2008, 35-5). What is my position that lags behind the work of Milgram, and moreover, the critique of Stengers? Why pick at the wounds of these once turned over battles that take place in academia? I do this to question what the term *territoriality* might mean *after* Milgram.

Analysing Territoriality — The Deterritorial & the Reterritorial

I will consider obedience and disobedience to authority in Milgram's experiment as an action of territoriality. I understand (as I set out earlier), that touch is the agency of both the technologies that perform a fake electric shock (the electrical connectivity); and the touch that involves one human touching another (active touch). I will go on to explain various other deterritorialisation and reterritorialisation moves concerned with how Milgram altered the spatial arrangements of the experiments 1-4, (1. Remote-Victim, 2. Voice-Feedback, 3. Proximity, and 4. Touch-Proximity).

Both the work of Edward Hall and Stanley Milgram refer to the work of the Dutch ethologist, Niko Tinbergen to develop their concepts of territoriality: Hall for the effects of the crowd on individual territories (Tinbergen, studies of 1952, 1953, and 1958 in Hall, 1966: 17, and 57); and Milgram, for his comparative argument

¹⁴⁸ In the foreword to Stengers' book *Power and Invention* (1997), Latour makes an ambiguous yet damning statement: "For instance, Popper's criterion will keep Stanley Milgram's impeccably falsified experiments since it puts to test the wild hypothesis of an innate obedience to authority among American students" (Latour, in Stengers, 1997 :xvi). If taken literally, Latour could be insinuating that Milgram used students yet the experiments employed plumbers and nurses. Could Latour be accused of planning new specters in the Milgram Experiment? And, did Milgram have a reputation for treating his students with disdain? Milgram has a mixed relationship with those he taught. In his biography, one student Robert Panzarella, recalls a class with Milgram: "He began by saying, 'I didn't study obedience because I'm an authoritarian person,' at which several of us burst out laughing . . . Apparently, he was conscious that this was what people thought anyway" (Blass, 2004: 184). There are many interviews with Milgram's students to account for his authoritarian attitude to teaching, but there are also many contrary accounts from his doctoral students. Milgram was known for taking on a wide range of PhD students with subjects interests beside his own.

between the physical dominance structures in the animal world, and the human structures of authority as mediated by symbols (Tinbergen, 1953, in Milgram, 1974: 141). Hall notes that territoriality makes the relation of status with dominance in species; for Milgram the importance of status with obedience is divided into three main elements, status, position and action (Milgram, 1974: 107). In addition, Deleuze and Guattari use Tinbergen to argue against his “aborescent model” of territoriality.

If we ask the general question, “What holds things together?” the clearest, easiest answer seems to be provided by a formalizing, linear, hierarchized, centralized aborescent model. (Deleuze & Guattari, [2008] 2004: 361)

Both Latour (having worked with Strum on the paper, ‘The Meanings of Social: From Baboon to Humans,’ 1987) and Stengers refer to the ethologist Shirley Strum, rather than Niko Tinbergen. Strum’s assertion of her role as scientist, “compels her to declare that her observations are incompatible with the idea of a submission to rules inscribed in the species” (Stengers, 2000: 63). It is important to note that a notion of territoriality that effects baboons is not the same, but is connected to a territoriality of humans. The same can be said of humans and machines with both having mediatory and intermediary roles that could be considered territorial. This is the territoriality not just of one academic over another (Deleuze over Tinbergen), but one species over another (human over ape).

For now, I will define what Deleuze and Guattari consider territorial about territory and terrain. They also cite Tinbergen but apply it to concerns of capital using metaphors taken from geology rather than geography. They describe deterritorialisation as the movement by which ‘one’ leaves a territory and travels to another. Even if the new territory (or assemblage) may operate as a reterritorialisation, something that “has-the-value-of-home” may still be function. In the examples of Deleuze and Guattari: a lobster may walk in a long march, and chaffinches might flock in extraordinary numbers, but these mass-migrations, whether they are magnetic or solar guided are territories “on route” (Deleuze & Guattari, 1987: 360). John MacGregor Wise, citing the work of Deleuze & Guattari considers that:

Each deterritorialisation is always accompanied by a reterritorialisation, a reattachment to different sites, actors and so on; a reestablishing of the territory through other means (e.g. by capital rather than law); and a re-intensification of a different form of that matter. (MacGregor Wise, 1997: 69)

I will now explain the logic of deterritorialisation and reterritorialisation with regard to Milgram's Experiment. Authority and the subject-volunteer are caught up in the action of deterritorialising and reterritorialising; either in a similar, or opposite direction dependent on whether the subject-volunteer decide to obey or disobey the academic authority to which the experiment belongs. Deterritorialisation and reterritorialisation occur at each stage of the word-test be that to continue with more punishment, or for the subject-volunteer to end the experiment by refusing to partake. The 'deterritorialisation move' occurs with the break of social relations between subject and experimenter. When does reterritorialisation occur? The reterritorialisation happens in the Milgram's experiment when the subject-volunteer allies with the victim-learner, or when the subject-volunteer removes him or herself from the experiment.

Milgram's 'Obedience to Authority' experiments reveal that space is not just an empty cavity but one that is full of connections and relations from subject to victim, or from test paper to voltage meter. These proxemics are between the subjects and the equipment in an isolated spatial setting. Deterritorialisation and reterritorialisation also takes place in the debriefing interview and thereafter, when the volunteer and experimenter go "on route" with the rest of their day. Deterritorialisation and reterritorialisation is also the work done by Stengers on Milgram's experiment. It also moves the work done on Tinbergen's meaning of 'territoriality' and the further work done by Hall, and then by Deleuze and Guattari — each researcher takes the phrase and makes it their own. These are the moments when an assertion of personal space or a violation of personal space occurs. Each of the examples above have been considered in this way. I do not want to totalise the use of the word territoriality here but rather aim to show how the territoriality has multi-directional meaning. Deterritorialisation and reterritorialisation are not just any kind of movement. Deleuze and Guattari use these terms as a form of structuration. Deterritorialisation and reterritorialisation are the moves between various large and

small actors not just the movement between geographical places. For Deleuze and Guattari, territoriality is often discussed in terms of capital, whereas for Edward Hall it is cultural, yet for both it is normally geopolitical, of which aspect I will discuss next.

Deleuze and Guattari believe that territoriality is not linear and does not conform to Tinbergen's system of a "territorial centre" and "subordinate centres" (Tinbergen, 1969; in Deleuze and Guattari, [1988] 2004: 361). Territoriality can be applied to spatial formations of territory that pertain to both body and place. Deleuze and Guattari do this by talking about the earth as a 'body without organs' (BwO).¹⁴⁹ Their considerations of territoriality overall are not restrictively applied to either territory or the body but are importantly co-relational between actors (human and non-human), environment and machine. If territory is imagined one can think of emotions, psychogeographies, and mental maps.¹⁵⁰ Territoriality is not just about spatial proximities it is also about structure (particularly political structure). Therefore, the scientific equipment, used in Milgram's experiments to punish, deterritorialises and reterritorialises the subject as does the geographical spatial setting. Deterritorialisation and reterritorialisation are geopolitical movements.

Deleuze & Guattari write:

The territoriality of the assemblage originates in a certain decoding of milieus. The territory is just as inseparable from de-territorialization as the code from de-coding. (Deleuze & Guattari, [1988] 2004: 556)

Even though ethologists consider relations at the molecular level they do not give respect (according to Deleuze and Guattari), to the hierarchy or distinction between forms. Deterritorialisation and reterritorialisation are not a binary and they are also not opposite. An assemblage that constitutes a territoriality is usually held together by determining a respect for what is human as opposed to machine. Deleuze and Guattari emphasise that what holds an assemblage together is the cutting edge of deterritorialisation. Reterritorialisation does not return to the same territoriality necessarily, it can extend territoriality forward.

¹⁴⁹ I will not use the BwO's (body without organs) metaphor because I find its capacity to "embody the earth" a misleading phrase when attempting to consider that special nowheres have little to do in form with the earth or body.

¹⁵⁰ Milgram also researched the mental maps of Paris and New York (Blass, 1973).

How Technology Figures in Territoriality

Milgram makes a link between territoriality and machines but it is limited to a discussion of counter-anthropomorphism. Milgram defines this as the “fragmentation of the total human act” (Milgram, 1974: 29).

Some people treat systems of human origin as if they existed above and beyond any human agent, beyond the control of whim or human feeling. (Milgram, 1974: 26)

The electrical instrumentation used is a part of the division of labour that Fordism necessitates. The instruments used in the experiment are evocative of the human experiments conducted in World War II, as well as the switches and dials of a cold war fail-safe system (discussed in the next chapter). By foregrounding the technological devices, deterritorialisation in the Milgram experiments is a measurable vector of voltage over time: it is also the magnitude of the effects of anxiety, marked by the change from the technical, in the first experiment (risk measured as symbolic dials indicating voltage); and language, in experiments 2-4 (risk measured in the verbal displeasures of the learner). The duration of obedience and the time which a subject took to obey or disobey was not recorded as a significant factor of authority in these experiments. Milgram does not focus on the time taken during each experiment, a frame of safety he should have considered. His experiment is marked violently by electricity and its potential to be intensely felt by the body; yet little analysis of how specifically, electricity (fake or real) interferes with touch is explored in further analyses of Milgram's research.¹⁵¹ There is little concern for electricity itself being an authority of science with territorialising properties: this is overlooked by both Latour and Stengers in their critique of invention and criticism of Milgram.

This section showed how the movements of deterritoriality and reterritoriality can be considered at any level of agency and is applied as a structuration tool, to the

¹⁵¹ Hall said, “territory is in every sense of the word an extension of the organism, which is marked by visual, vocal, and olfactory signs” (Hall, [1966] 1990: 103). Therefore, territory is an observable phenomena yet this lacks the essential imaginings that all conceptions of territoriality need in order to achieve territory. It does not consider the planning stage of territoriality which is discussed further in chapter six.

organisation (Yale) or to a single actor (Gretchen) or group of actors (subject-volunteers), however, big or small the actor or actant.

Space and Place — Territoriality in Fixed Feature & Semi-Fixed Feature Space

The experiments are operating at the levels of territoriality that Hall distinguishes as 'fixed-feature' space. Milgram's 'Obedience to Authority' experiments occupy a fixed-feature space, manipulating the proxemics between three designated roles: 1. the subject as teacher, 2. the victim as learner, 3. the experimenter as authority. Milgram organizes the subject-volunteer, victim-learner and experimenter roles in various distances from one another in which they are together involved in a task of learning through punishment. These experiments suggest that the manipulation of personal space in a fixed-feature set-up shows that the body can be brought closer to death in set-ups of touch-proximity, regardless of a specificity of 'place.' Following the logical distinction between place and space that Marc Augé, the French anthropologist defines, "the term 'space' is more abstract in itself than the term 'place'" (Augé, 1995: 92). How are the places that situate the act of violence configured? What difference is made by asserting space rather than place? If the places are not as important as the spaces between people, in the experiments of obedience, then it follows that territoriality, even as a fixed-feature arrangement has little to do with what Augé terms place.

Obedience decreased when the proximity of the experimenter to the subject was reduced. In some cases the subject would have administered a lethal shock. The subjects' capacity to preserve another human's life is supposedly augmented in scenarios of touch-proximity in the near phase. Personal space is a part of a preservation system that can also protect life whilst alienating others. It can be an exclusive space shared with an impersonal authority, resulting in deference towards 'outsiders.' It can also however, be a shared space of disobedience if subjects are motivated to co-conspire. Personal space is: both torture and protection from torture; both physical pain and the pain of prevention; a violence of violation (be that

systemic or symbolic); the violence of self-regulation; and of others regulating the self. Various torture methods try to damage and erode a human's ability to protect her or himself, often by violating the conventions of obedience, as a proximity between humans. A benign concept of personal space inhibits violence, but it also produces a body near to death; yet, when considering the malevolence of territoriality personal space is far from benign.

The Milgram Reenactments

It is one thing to critique Milgram but it is quite another to reenact the Milgram's 'Obedience to Authority' experiments. This was done by the artist Rod Dickinson and adapted by the scientists, Charles Sheridan and Richard King (1971). The latter replaced the human learner with a dog, and the electricity was live. The results of Sheridan and King were apparently unremarkable varying little from Milgram's initial findings. He has also performed a reenactment at a performance entitled 'Who, What, Where, When, Why and How' which he explains is "an examination of the government press briefing", staged at SMART Project Space in Amsterdam, in July 2009. The performance involved two actors playing a military and governmental leader reading out the rhetoric of war. His work helped me to think through the 're' in reenactment, as an integral process by which chatbots form talk. The live press conference merged, (undifferentiated) with the arts audience in attendance. The reenactment included an auto-cue which was situated behind the audience. It was only by turning around in one's seat that the excerpts of text could be differentiated from the original war enactments. The press conference was a recital of famous citations of world government and military leaders such as Hussein and Schwarzkopf. By reading the auto-cue the audience present were able to differentiate the national from the global rhetoric (American and Iraqi); the government from the military (Schwarzkopf from Thatcher); and the past from more recent acts of war (World War II, from the Falklands War, from the Iraqi war). I did not witness the Milgram's experiment reenactment but had conversations about both reenactments with Rod Dickinson. The reenactment processes of both use actors and exacting technological props. These reenactments perform the atmosphere of the

original enactments but in the process of reenactment, a further layer of affective atmosphere will subsequently impact on the first. In relation to the chatbots and the context of reenactment, it is one thing to assume to hear the atmospheric impacts of AI in the silent re-reading of one's transcriptions but there is a further layer of affective atmosphere reenacted by the voice-over specialists in the Audio Rudiments which reflect the multiple interpretations of interactive talk. This helps to reflect on the multiple repetitions of chatbot talk which by process will repeat and reenact *ad infinitum*.

Dickinson's reenactment took place in Glasgow, in the Contemporary Gallery of Art, in 2002. Several decades on from Milgram's initial experiments, Dickinson brought a new contemporary audience in contact with the testing process, this time with an artist replacing Milgram's protagonist role of coordination and control. I remain as does any reader outside of this reenactment, as a secondary audience encountering Dickinson (a doubling of distance from the original experiments). Dickinson reenacts with the precision of academic research but this time with research as topic. I understand it as a comment on the obedience of research methods in academia and the disobedience of art practice.¹⁵² To discuss this further would impose on Milgram's experiments and the conventions associated with the artist as protagonist and provocative; deterritorialising away from the intensities of the initial experiments. So far, I have commented on how Milgram helps to observe the work of Hall, and how other researchers have been informed by Milgram, while the last example showed how Milgram's experiment has been performed in the arts. All of these have done little to consider the territorialisation of the reader, the subject with which I will close the first part of this chapter.

Milgram observed in the subject-volunteer called Fred, the etiquette in speech when pertaining to the actions of torture. One of the etiquettes of a doctoral thesis is to keep 'you' out of which I just disobeyed, and I am parodying back to 'you' now. So for those technological readers, lost in my humanities, and for those in science and technoscience picking over every word, and other artists enjoying the

¹⁵² However, in Tom McCarthy's article for Dickinson's reenactment is seen as concerned with anxiety in the arts, as an anxiety towards meaning, noting that the authenticity of Milgram's 'Obedience to Authority' experiments is already to an extent fake, when one considers that Milgram used actors in the roles of the experiments and the extent to which reality is conceived in the experiment.

knowingness of disobedience: how would you display a disciplinary etiquette, to interpret and territorialise Milgram's study? I am concerned that the reader is already territorialising this text by remaining remote to this study, distant and silent.

This section can be considered a post-post-interview for the reader. Milgram concluded in his experiments; "The remarkable thing is, once the 'ice is broken' through disobedience, virtually all the tension, anxiety, and fear evaporate" (Milgram, 1974: 170). To be in touch-proximity to the pain of the subject, increasingly created solidarity between the subject-volunteer and victim-learner as opposed to the solidarity between experimenter and subject. By referring to the reader of this text I want to think about the space where written violence takes part (symbolic/systemic). After all, Milgram's experiments are now a documented text. Can the equivalent of 450 volts be signified in the text? Milgram brought into play the entire of Yale, the community of Bridgepoint, and the ethics of academia. He noted the tension levels of the subject-volunteers indicated as levels of sweat, trembling, acute embarrassment, anxious laughter, and verbal comments (Milgram, 1974: 60 & 170).¹⁵³ As MacGregor Wise suggests; "Territoriality refers to intensities" (Wise, 1997: 68). Following this logic, an affective attachment to the task of administering a word-pair test is an intensive investment in the elite; in this case, the educational establishment of Yale University. My analysis is a territorialisation using Hall, Deleuze and Guattari. By discussing the reader, the territoriality of various academic fields (and their hierarchical interdisciplinarity), reenactments and newer experiments. I have shown the multiple levels by which territoriality and systemic violence continue to operate on an experiment that makes co-relational torturers and do-gooders.

The main link between using Milgram's case and the next part of the chapter is to extend a discussion about territoriality of hidden interlocutors. Both are interventions of authoritative expertise which create ambiguous and unsettling territoriality. The two experimental procedures capture a deterritorialisation and a reterritorialisation, which are similar but not the same. They are both moments of reattachment that pivot around a mediating technology, be that an electric shock

¹⁵³ "As the subject contemplates this break, anxiety is generated, signaling him to step back from the forbidden action and thereby creating an emotional barrier through which he must pass in order to defy authority" (Milgram, 1974: 170).

machine or a chatbot. They are moments where there is a reestablishing of territory through a mediating technology and a reattachment to the same territory with the same coordinates, but with a change (or revealing) of the hidden interlocutors.

Although the two cases are by no means a logical comparison, they both do involve human-machine interactions that have been written about in the social sciences and have been used to make performance art. The interlocutors involved in both cases present a deterritorialisation and a reterritorialisation. Neither cases are models of 'good science' or 'good politics' (as Latour indicated in the first citation of this chapter) but involve lots of invention and opportunities to consider 'good construction' as the territorial aspects surrounding mediating machines.

The Pick-Up Rudiment

The next experiment involves a chatbot pick-up to further a discussion of the territorial provocations and the mediation of technological things. Pick-ups enable a further discussion of reenactment and a critique of deceptive experimental procedures. The pick-up technique crept up and territorialised one of the Prisoner's Dilemma Rudiments that I was about to conduct with the Elizabot. It provides a discussion of the situated activities of territoriality in language moving from a word-pair test to the manipulation of the 'meet and greet' rituals of interaction. There is an etiquette to the start of conversation with chatbots but not to the end. Developers have yet to territorialise or control this part of the talk except in attempts to keep talk ongoing. This section will focus on the start up of bot-chat to analyse the uncertainty of the violation detailed in the transcript that follows.

The Pick-Up Rudiment With Eliza (30th December 2004)

[Pick-up] You:	Fuck you.
[Pick-up] Eliza:	Oh, i [].
[Amanda] You:	I never said that?
Eliza:	Can you elaborate on that?
[Amanda] You:	Fuck you

Eliza: Oh, i [].
 [Amanda] You: did you write that?
 Eliza: Oh, i write that.

The first two lines of the text above are a 'pick-up'¹⁵⁴ technique used by a chatbot developer to get interaction started. The same Elizabot has created other surprising pick-ups:

**A Provocation Pick-Up
 With Eliza (19th April 2009)**

[Pick-up] You¹⁵⁵: Forgot to masturbate
 [Pick-up] Eliza: Please go on.

Pick-ups work similar to an advertising teaser in that they incite intrigue, yet not all, nor indeed that many, are provocative, or as explicit as those I encountered with Eliza.¹⁵⁶ The pick-up shapes the content at the start and creates the order of turn-taking. The Elizabots pick-up gives the pretense of the user starting interaction with Eliza responding. Eliza's pick-up is the length of one reply and one response. The offense in the pick-ups excerpts above are ascribed to my text box, and not to Eliza. The pick-up technique is a caricature of interaction with Eliza. Eliza's interaction is reactive. The pick-up is the developer's domain, a way to hijack content. It is also a subversion of the meet and greet conventions. The pick-up is

154 A 'developer' may also be a programmer and can also be referred to as a "bot-maker", a term used by, Robby Garner. (Garner, R. Robitron Posting, #10716 'Offensive Bot Responses' 22 June 2008. Available from: <http://tech.groups.yahoo.com/group/Robitron/> [Accessed 30 June 2009]).

155 As a reminder, Eliza began with a two-line pick-up, therefore the pronouns 'you' and Eliza belong neither to the chatbot or myself as a part of a live conversation, but as a prerecorded script to begin live interaction. These pick-ups are created by the developer.

156 There are also chatbots, such as a donkey bot created by David Hamill which is yet to talk back as it is an experiment in getting a machine to learn vocabulary before interacting by way of response. (Hamill, D. 'Ditto the Donkey'[online]. Available from: <http://www.convo.co.uk/x02/> [Accessed, 30 June 2009]).

contradictory, reading as 'go away - come here.' The pick-up sets the formal and informal tone of proceeding interaction.¹⁵⁷

Each of the four chatbots Jabberwacky, Brianna, Eliza, and Alice start interaction differently. I asked the Robitron group:

What is the reason behind some chatbots starting with the chatbot's response, (for example, Rollo Carpenter's Jabberwacky) and others with the user's interaction (for example, Richard Wallace's Alice): and why does the Elizabot start with two text boxes filled in already?

Dr Richard Wallace informed me that in an earlier version of his Alicebot there were around 200 pick-up lines used to initiate conversation but Alice no longer uses a pick-up technique.¹⁵⁸ By measuring the length of the conversations that followed from each of the pick-up lines, Wallace explained that the best pick-up lines were: 'what's your favourite movie?' and the worst was 'what do you think caused World War I?' One of the worst pick-up lines was 'ASL,' which is an acronym for, 'what is your age/sex/location?' and is commonly used in chatroom conversation. In another response to my Robitron enquiry, the developer, Rollo Carpenter explained that he didn't select the best pick-up lines manually but that the chatbot program does: "Lines that are most answered, without being filtered, get proportionality favored in the future" (Carpenter, 2009).¹⁵⁹ Carpenter had tried various pick-up techniques with his chatbots, explaining that Jabberwacky uses a pick-up line, whereas his Cleverbot does not, "just to be different" (Carpenter, 2009).

157 The pick-up also problematises the personal pronoun 'you,' in contrast, Artificial Intelligence, has problematised the personal pronoun, 'I.' Since Turing's Test (1950) the 'I' and the 'you' have been a distinction between human and machine, but also as a game of gender; of distinguishing woman from machine. The third part of the problem is the tying of the two words, the fuck followed by the you as an indirect violence of language. Are chatbots sustaining the texture of social violence that pertains to violence in language (Žižek, 2008:61)? I believe that there should be a commonality between the ideas adopted for major violence and minor violations and that everyday occurrences of something similar to forward panic endured over a 'fail-safe' period are just as damaging. I therefore intend to show how the credible minor personal space violations are by exemplifying troubles with chatbot interactions asking are they that different from the everyday violations that occur in life on a regular daily basis?

158 Robitron Postings, #12154, 'Pick-up Lines was: [Robitron] Which Eliza?' 22 January 2009. Available from: <http://tech.groups.yahoo.com/group/Robitron/> [Accessed 30 June 2009].

159 Robitron Postings, #12154, 'Pick-up Lines was: [Robitron] Which Eliza?' 22 January 2009. Available from: <http://tech.groups.yahoo.com/group/Robitron/> [Accessed 30 June 2009].

Developer's Reflections of Offensive Language

Absent from the previous sections is the responses of the Elizabot's developer. As a consequence of being unable to interview him about the use of offensive language, and the pick-up technique; this section considers the reflections of the Robitron developers. They provide a technical and a personal viewpoint on how they each choose to deal with general provocations that occur on either side of the bot-chat (by developer or user). Robitron developers are concerned with the relation of expletives used by bots and users. These cares are entwined with anxieties of control over the interactive process. I am interested in why the developers care if objective violence matters in language. I personally find the Elizabot's pick-up technique oddly offensive and a little surprising.

It seems that a byproduct of chatbot interaction is the ability for a user to come along and vent, that there is a need to 'sound-off' at chatbots. Robitron members have discussed the occurrence of offensive language in a series of posts entitled, *Offensive Bot Responses*, June 2008 (previously discussed in chapter 2). The Robitron group discussed two consequences of swearing in chatbot interaction but do not consider a developer swearing in a pick-up. The developers do discuss how this affects a chatbot's ability to learn the responses of users in further interactions. Several developers felt distressed when reading the frequent occurrences of offensive language that appears repeatedly in their chatbot's datalog. Their responses ranged from finding the language too traumatic to keep on reading, to an acceptance that this is an inevitable process of learning, indicating that swearing is a part of everyday talk. Other developers felt that it was detrimental to the chatbot and opinion was divided among the group of developers. The discussion thread went on to discuss various technical ways that a developer can deal with offensive language in order to "socially engineer" interaction and gain control over the occurrence of offensive language.

Is the only answer to offensive language to manipulate and regulate the user's proximity to the chatbot? Offensive language is not such a dark art, but as Robby Garner said users chat to: "exercise their dark side to the extreme" (Garner, 2008).

Adeena Mig considered offensive language as “very nasty things” (Mig, 2008). Robby Garner pondered, could it “simply be considered normal” (Garner, 2008). Jeremy Gardiner believed that it creates a “sour and aggressive” chatbot (Gardiner, 2008). In response to Adeena, Noel Bush writes:

I'm a lot less disturbed by people cursing up a storm at a bot than by
people cursing at me. :-) Noel Bush (Bush, 2008)

Bush considered offensive inputs as a part of normal language, along with Jeremy Gardiner (he was the initial developer that began the thread of the posts as a technical query). Bush believes that it is just the frequency of offense that renders chatbot interaction distinct from everyday human interactions. To draw on the data of chapter two, I am not so sure that this is the case. The chatbots' use of expletives is treated differently to the user's use of expletives. Chatbot developers deal with offensive talk and to an extent are met with the regulations of national and international law, to regulate offense as a form of unwanted interaction. Chatbots in this are a form of containment, a vessel of user deviancy (dependent on whether one regards offensive language as normative or deviant). Chatbots are open to offense by users, they are able to repeat without trace and without the user being held to account (due to laws preventing the tracing of IP addresses).

Methods of deterrence do however present their own problems. The range of technical solutions to reduce the occurrence of offensive language was solved for the main part by deterring persons from swearing. This was done by making users aware that they are entering a social environment that other people use. Chatbots can occupy forums and chatrooms. The rules of human-to-human interaction in these environments can also be applied to the interaction with chatbots. It was discussed that the method by which a developer deters offensive language, may in fact break the law. Tom Joyce (the developer who helped in the co-word occurrence test in chapter two) suggested that deterring a person who consistently offended could be

achieved by a reminder that user details are being, or could be, traced.¹⁶⁰ A developer can also monitor the number of occurrences of an offense by individual users. The user's IP number can be stored and a threat can then follow, informing the offender that they maybe excluded from the forum. To get hold of these details requires that the forum has a registration procedure. Joyce's hypothetical method is supported by David Hamill's response to Joyce's posting (Hamill, 2008 and Joyce, 2008). Hamill suggests that there are data protection issues around this process (at least at this present time) within Europe that restricts a computer from storing and using personal data in this way. To avoid this illegality Hamill suggests registering with the Data Protection Register in order to "operate within the act" (Hamill, 2008). Regardless of whether storing the location of a person is legal or illegal, tying the user to their bodily location configures a personal space that is biologically bound. The implications of this are that the virtual interactor is tied to the rules and laws of the physical interactor and the physical environment of the user. This mode of censorship locks down interaction, keeping personal space firmly attached to the physical coordinates of the body-in-place. Censorship of offensive language that is deemed antisocial can be used to entrap our virtuality within the confines of the body by the locatable coordinates of one's computer.

Another alternative example of how developers deter offensive interaction is evident in the Loebner prize rules, 2008. According to the judge, Huma Shah, each of the Loebner prize judges must follow the rule below:

Please do not abuse a system/use abusive language – the developers will be able to 'see' IP addresses of those interacting with their systems. If you become frustrated with a system's responses or its inability to follow your conversation please end the dialogue. (Huma Shah's Robitron Posting 'Offensive bot responses,' # 10719, 23 June

¹⁶⁰ Registration to a forum can initiate users into forum rules. Registration creates a regulatory code of conduct, as Tom Joyce discusses concerning the 'phpBB3 Forum AI.' Building into the forum software are "word censors" for those that still swear regardless of forum rules:

"so the word censors are not of much use. The database can be scanned with SQL:

```
Select username, ip_number from posts_table where conversation like '%freck%'
```

"freck" is not an actual curse word. It is used on TV on Battle Star Galactica.

Then you can just scan for that one username who curses, whenever they login instead of everyone all the time. Again this is only a hypothetical. It is not required in reality. Note: This example is made intentionally simple, so non-programmers can enjoy it, while getting the point across to developers" (Tom Joyce, Robitron Posting *Offensive bot responses*, #10721, 23 June 2008. Available from: <http://tech.groups.yahoo.com/group/Robitron/> [Accessed 30 June 2009]).

2008. Available from: <http://tech.groups.yahoo.com/group/Robitron/>
[Accessed 30 June 2008].

The ruling implies that offensive language occurs due to frustration with the system, and refers back to ‘sounding off’ by users but this also applies to developers interacting with another chatbot. There is tacit social responsibility applied in the ‘Offensive Bot Responses’ posts of Joyce and Shah. To behave as a human might, requires the chatbot interaction to adhere on both sides (human or machine) to the polite codes of conduct, and to formal ways of greeting. Responsibility to others is a way of controlling the form of talk by asking the user to leave the situation, in order to not get too close. This is a preventative method to deter frustration repeating back into the chatbot system.

The issue of reenactment which I first investigated when considering Milgram's ‘Obedience to Authority’ experiments will now be examined in relation to the occurrence of offensive language in chatbots. Offensive language can be a one-sided retort but it is often used to provoke a reaction. Offensive language is not just a single utterance, it is reactive process reliant on interpretation. Chatbot judges (which includes developer) are advised not to vent off at the chatbots in the competition; and developer's in Europe are unable to log or track users as a way to threaten or deter offensive users. Both methods cannot prevent frustration repeating back into the chatbot system. The first protects the machinic system and the second protects the human rights of the user to be untraceable, anonymous and unidentifiable to a specific IP server (which gives a data profile of the details pertaining to human identity and place where the interaction took place). The offensive pick-up technique rouses protective methods in the user and the developer (and to an extent the chatbot). The developer remains anonymous and untraceable behind the machinic system, (a form of protection), whereas the developer leaves the chatbot system open to offense (with a potential for the system to be abused); in fact the pick-up welcomes users to offend (perhaps to capture this behaviour pattern, yet to what ends — remains unknown). The Eliza developer is experimenting whether this is with a capital ‘E’ to Experiment, or a soft *e* to experiment. What the developer hopes to reproduce is unknown but it set-ups a guarantee of reactive rejection to the machinic system. It is a risky and inventive procedure, but whether it makes for a ‘good politics’ or ‘good science’ is open to critique. Regulating and controlling chatbot talk

is just one way to shape reactive provocation but this depends on knowing whether an expletive is offensive and this depends on how the offensive context is imagined within an chatbot system. Referring back to chapter 2, it depends whether the pick-up technique is seen as creating nonsense and in this case the offensive pick-up is a violation that is a subsidiary category of nonsense: or as a violence for disrespecting the machine, that is intended and encouraged in order to include offensive language along with the cohesive meaningful vernacular language.

Hidden Interlocutors in Audio & Transcript of Rudiments

The pick-up technique was enacted as several audio rudiments which translate the pick-up from text to speech. It is a way to understand how one 'hear's to imagine how the chatbot's words as an animated speech act, to question how one might hear prosody in text-based chat. However, the discussion that follows is less to do with what is heard but what remains silent, that cannot be translated from text to speech, that is the use of square brackets that ensues in the second line of the Pick-Up Rudiment. The offensive pick-up technique is not a regular way for a chatbot to talk. The square brackets included in the pick-up, are part of the pick-up and have not been added in my subsequent transcription. The brackets would be significant to a developer as a coding tool, usually used to place metadata. Both lines of the pick-up are displayed on the chatbot interface but above the text boxes. This is where the chatbot interaction is displayed once it has been uttered. The interaction, therefore, starts before the text boxes but in fact is displayed in the text that goes afterwards. It is a disorientating spatiality that merges two modes of time, the before and the after (a further discussion of time and duration is pursued in chapter 6). The square brackets and the entire pick-up are usually created by the developer of the chatbot and the anonymity of the identity of the chatbot developer is brought into question as a further questioning of their knowledge base, beyond chatbot technology. This use of square brackets is a form of language codification used in many disciplines but that appears empty of instruction, not even an ellipsis is included which would

denote that text is missing. The emptiness of the square brackets is usually denoted as a pause with an ellipsis, such as [. . .]

A potential conversational expert lurks within the developer's pick-up sequence evident in this use of code. I would like to suggest that a main user-group of chatbots are conversational experts, since this group has reasons to interact with a chatbot. The square brackets are a type of interjection used in a variety of ways, such as proofreading, coding C++ to place metadata, or as gestural indications, or pauses used by a director or playwright to make notes to actors (as used by Artaud in his scripts for theatre). Each method nests information within information. In this thesis square brackets nest timestamps when internet sites were last accessed using metadata to order the various durations of time. In the appendix I have used square brackets to denote an error, [sic] is used within the text and not a subsequent error made in my translation. John J. Gumperz, a professor of anthropological linguistics writes in his chapter, 'Contextualisation and Understanding,' that square brackets are to be differentiated from other forms of bracketing:

- [] Nonlexical phenomena, both vocal and nonvocal, which interrupt the lexical stretch (eg. text [laugh] text//)
 - () Unintelligible speech
- (Gumperz in Duranti & Goodwin, 1992: 248)

In anthropological linguistics square brackets are used to add context outside of what is spoken, additions that might indicate bodies situated in environments. Square brackets can signify a place to discuss the social meaning of language as a text that will be read by another at a later time. One of the objectives of Duranti and Goodwin's collected writings on context is to get each of the fields whose members attributed to the book (linguistic anthropology, sociolinguistics, discourse analysis, pragmatics, conversational analysis, and the sociology of language) to be exposed to each other's techniques as a commitment to study "situated discourse" (Duranti & Goodwin, 1992: 2). Considering this, I would argue that it is already happening potentially in the way chatbots are used by researchers of language, particularly on the internet. Researchers are exposed to each other's techniques. Eliza's pick-up has brought together a discussion of pick-ups, square brackets and rudiments. The square brackets I conclude is a 'special nowhere' (as understood in chapter one) of language experts to situate their metadata, but what of this system situated within the action of

a developer's pick-up, how is it meaningful? This special nowhere is a place for researchers to simultaneously occupy the outside and inside of the frame of a single action. The special nowhere is an analytic pause within an interactional stage which extends possibilities of including metadata (which can be prosodic, to stress patterns of intonation and emotional variation) within the frame of the pick-up.

Everything is pitiful, and nothing is missing and yet the self is no longer there.
There is in the action of opium [. . .]

(Artaud, [1934] 1988)

The action of opium in Artaud's letter to a friend, describes the effect of opium as a response that is almost beyond writing and words, it is to be left out of descriptive writing. The effect is only symbolically represented. Yet, how does it help to consider the square brackets as a territorial move? The square brackets illuminate that the process of chatbot talk is a deterritorialisation and reterritorialisation of data and metadata. Territorialisation moves do not just affect semi and fixed-feature environments in the physical world, but are also to be found within language and refer not just to the spatialities, (including the symbolic and metaphorical spatialities) such as the ellipsis and the square brackets. Territorialisation moves are not just the expletives used in the first line of the pick-up but the inclusion of the square brackets in the second. The entire pick-up is a territorial move of reenactment of mock interaction. The territorialisation moves in a pick-up involve hidden actants (such as the developer), the pretense of Eliza and a user interacting before subsequent live interaction takes place.

Interrupting Writing & Counteranthropomorphising Victims

This section considers the interrelation of violence in academic writing concentrating back again on the first line of the pick-up. Does anyone swear in academic writing? Shock, surprise and startle are not usual styles of academic writing, they are theatrical styles of abrasion. Writers, such as David Foster

Wallace¹⁶¹, and academics such as Lee Edelman and Stephen Shaviro have all used 'fuck' in their writing but to what effect?

Fuck the social order and the Child in whose name we're collectively terrorized; fuck Annie, fuck the waif from Les Mis; fuck the poor, innocent kid on the Net; fuck Laws both with capital ls and with small; fuck the whole network of Symbolic relations and the future that serves as its prop. (Edelman, 2004: 29)

Wallace toys with the sympathies of the reader as one is pulled in and out of sympathy for the character referred to as B.I. and the women that he recounts. The quote below is taken from one final short story entitled like the book where it is found, *Brief Interviews with Hideous men*, (Foster Wallace, 1999: 245). The story describes B.I. raping a woman. At first, one is sympathetic with the victim whose voice is not present. After the story is reenacted in fiction, Foster Wallace (as author), leads the reader towards the final twist in the story. At this point it is unclear and provocatively ambiguous as to whether Foster Wallace is addressing the most likely readership of his book, a female, feminist readership; it is interesting to suggest that Foster Wallace's own reflective voice breaks through the character's voice to biographically utter anger at the listener's gratification obtained from this violent self-confession. Although Foster Wallace addresses a feminist reader (amongst others); he doesn't use the word 'fuck' in this instance, though he does use other sexually explicit derogatory terms.

I stand here before you. Judge me, you chilly cunt. You dyke, you bitch, cooze, cunt, slut, gash. Happy now? All borne out? Be happy. I don't care. I knew she could. I knew I loved. End of story. (Foster Wallace, 1999: 271)

Foster Wallace startles the reader and when I read the story for the first time the affects it raised finally settled into a state of excited surprise. Edelman uses expletives to interrupt and subverts the technical use of language by the American government. Swearing stops oratory and rhetoric from operating smoothly and interrupts with antisocial effect. It is an unusual strategy to adopt and breaks with the conventional academic practices of writing and established traditions of formality. The inappropriate use of expletives in academia creates tension, it could be

¹⁶¹ David Foster Wallace was also an academic, but it is his short story and not his academic career that I bring to light in this thesis.

considered an immature stunt at worst, at best it can be used to undermine or make clear the conventions of certain interactional processes.

As an expression of frustrated hopelessness, Shaviro swears to undermine the positive associations of 'connectedness' that are asserted around web 2.0. Used neither to surprise or subvert, he merely uses it to describe a status quo of too much connectivity. The hopelessness of meaningful connection to a chatbot is fucked by the many disconnections and the involvement of metadata. It is the square brackets in the pick-up that illuminate the issues of connectivity in human to chatbot interaction. The square brackets interrupts the surprise of the offensive first line, and interrupts the appearance of Eliza interacting with a previous unfriendly user. Chatbots are neither friends or enemies in this study, but I did get caught up in the conflict game that was established in the pick-up. Chatbots are more laboratory rats than friendly pets. There is no such thing as a wild chatbot to be found on the internet, perhaps there are too many researchers conducting experiments on all sides of the interaction. Yet the more a chatbot becomes territorially controlled the more they seem to become feral things.

In her HCI research, De Angeli writes:

We claim that social agents do not only have to look good: they also have to behave well. Effective agents should set-up lasting and meaningful relationships with users while satisfying functional needs and aesthetic experiences. . . . Human tendencies to dominate, be rude, infer stupidity were all present in our study. Social agents will have a hard time to set-up relationships with such unfriendly partners.
(De Angeli et al., 2001: 7)

An attitude of supposed friendliness towards chatbots casts the chatbot role as victim, and the user's role as friend. Therefore, whatever violence or violation occurs, even if only to surprise or to startle, potentially makes victims out of chatbots and invisible perpetrators out of users. Why does the anthropomorphy felt towards chatbots on behalf of their developers or researchers always have to victimise the chatbot by feeling sorry, counter-anthropomorphically so without ever reflexively wondering what kind of protection mechanism or territoriality is being set-in-place? As the pick-up excerpts show, the chatbot and I repeated the pick-up verbatim. I vented at the chatbot in the same manner as the pick-up, and the chatbot predictably responded. There is no meaningful relationship evident here. I was not transformed anthropomorphically. There is no friend or foe. What is learned are the machinic

rules of repetitive learning and the codes of obedience and control set down by both the developer and user.

Pick-up techniques set the scene, but are they really needed in human-computer interaction? Pick-ups are used in all forms of human life from saying hello to a friend when meeting on the street or by saying hello on the telephone. They are just not referred to as “pick-ups”, which has a sexual connotation in the human-to-human vernacular use of the term. The pick-up technique as the chatbot developers understand is abbreviated in text messaging and in some chatbots they are absent altogether unless the user insists on enacting a meet and greet ritual without the developer’s prompt.

As for the fact that I swore back, I heard my reply reenacted in the Audio Rudiments and even if I meant this to be an utterance that tested the system, my ineloquent reply created a stalemate position. The pick-up line provokes and refuses to follow the conventional rituals of the polite meet and greet. I responded to the technique by following the pick-up’s direction of talk, reattaching to its territorial insistence of defensive and offensive interaction. It was an example of an experiment territorialising a Rudiment.

Milgram’s methodical experiments still resonate primarily for the ethical problematics and for Milgram’s lack of duty of care. The pick-up technique which may be used to guide new users into interacting with chatbots guided me away from my intentions to create a Rudiment, but the digression provided nonetheless, interesting data — albeit not in the way that I had intended. Both experiments resonate, they are innovative enactments that raise ethical challenges, particularly within interactive research. The pick-up technique (with offensive language) cut through the usual meet and greet ritual deterritorialising a highly territorial action and flow. The pick-up that has been most discussed in this chapter raises the question: who do we really meet when interacting with a chatbot; and who is this familiar stranger that swears to interact? A chatbot is in so many respects the ‘familiar stranger’ but in the case of the pick-up technique I attribute this more to the developer than to the autonomy of the chatbot. The developer in question (responsible for Eliza’s pick-ups) broke good social relations and rejected the friendly intimacy that de Angeli earlier brought into question. Eliza did have a hard time setting up good relations with humans because the developer territorialised the

interactive process with its pick-up technique. It is not the chatbot that is brought into question it is the developer.

I should add that it is difficult to differentiate the developer from the chatbot on most occasions, except for at times when the chatbot informs the user that it is learning and will report something to its developer (as is the case with the Alicebot), or when the pick-up technique seems so disconnected (in tone and manner) from the usual chatbot interaction (as was the case with the Elizabot). Yet this brings into question whether one can really differentiate the user and the chatbot when so much of what is said is continually repeated. Regardless of whose text box talk is uttered from, the similarities between the two are always evident in the techniques of elision (on behalf of the chatbot) and repair (on behalf of the user). However, the difference is apparent when things go wrong and the chatbot starts to produce nonsense. Differentiating the developer from the chatbot, and the chatbot from the user is a continual cycle of reattachment. The deterritorialisations and reterritorialisations that happen in chatbot interaction are far more fluctuating in this form of human-machine interaction than they would be in an informal chat between humans because the interaction always has the added element of a third and hidden interlocutor popping up in the text.

Conclusion

The pick-up not only suggests that chatbots are a form of experimental language (the language of experimental processes used by language experts) to which I contributed as a participant-researcher (with the result that my interactions will be added to the repertoire of chatbot responses). It goes beyond this to argue that transformations can occur with developer, chatbot and user. This transformation is more than just anthropomorphic affectations. These transformations are territorial actions. The “backlash of transformation” is made clear in the example of the the chamois territorialising the scientist-observer (Stengers, 1997: 172). In the pick-up is a transformation of a researcher finding a field of researchers in that I discovered the experimenters behind the chatbots. It was not experienced without the challenges of dominance and domination for example, the pick-up line was and is an experimental

procedure that had created enough interest to have overturned a rudimentary procedure.

In answer to the question posed at the beginning, what does it mean to interrupt a concept of territoriality, it is to interrupt a form of control, be that self-regulation or self-constraint, or the bind of personal space in an experimental procedure. I aimed to take into account my interpretations as a researcher becoming a participant in a developer's set-up, study or experiment (it is difficult to know within which of these the pick-up operates), taking into account the reflexive aspects of territoriality that were lacking in Milgram's own interpretations and the subsequent critiques.

By discussing Milgram's experiment alongside the pick-up technique I did not intend the argument of this chapter to be causal. I did however, want to illuminate territoriality as a problem of performance, of enactment and reenactment in the experimental setting. The Rudiments that were conducted throughout the research made me realise that I cannot observe without intervening. I also found that my transformations in talking to chatbots were not to find friendly companionship, or to stage human and non-human battles, or to enact the roles of friend and foe, irrespective of whether this involves chatbots or human users.

There are limits to this chapter, which includes the absence of the comments from the Elizabot's developer and a retort to the STS critique (other than my own), to what Milgram would say in response. Blass went as far as to say that Milgram would have been pleased with the continuing dramatisation of his obedience experiments citing Milgram as saying: "Good experiments, like good drama, embody verities" (Milgram in Blass, 2004: 263). I am not so sure that this would have been the case, nor is it a very rich interpretation of the critique of the performativity in Milgram's work. Blass found that Milgram's work has parallels in the current torture of prisoners at Abu Ghraib and the subsequent nine years of strip-search hoaxes made by American military personnel (Blass, 2004: 296). I believe that this form of correlation reproduces Milgram's experiments, rather than reenacts. It is Stengers' and Latour's critique that resonates. And of course Dickinson's work also resonates throughout the repetition enabling a twist that is not just a reenactment, but a transferral of a scientific experimental procedure to an arts space, thereby reattaching this reenactment and its ethical dilemma to the arts).

Experiments and critiques from disciplines other than the one from which it was created, do not always start so neatly from the same position, but from the position of a different territoriality which will observe or omit observations on the territoriality of living or technological thing; be that a human, primate or chatbot — conversational system or electrical machine. Finally, by interrupting territoriality I do not believe that territory belongs to the innate, and territoriality to the living; but there is a melding of the two. The experiments and critiques of this chapter are in some way questioning territorial behaviour: Strum noted (in the field of ethology) her own transformations of the researcher; I witnessed finding myself within an experimental procedure; Milgram in the field of social-psychology studying territoriality transformed the participant into a torturer/tortured. Yet, what of the actant critiquing? How are Stengers, Latour, and Dickinson transformed? Dickinson had transformed a new audience of critics and raised an ethical dilemma is raised in the sphere of performative reenactment. The original actors used by Milgram are now known actors from the outset, performing torture for an arts-going audience. Rudiments as a methodological procedure acknowledge the partial, fragmentary and ongoing process of the experiment and experimenter, to allow for transformations. When research is tidied up into a cohesive experimental procedure, further territorial moves need to be taken into account at the stage of critique. This is important when thinking through the process of when research goes *outside*, and ventures into other disciplinary arenas. There are ethics to be considered in the replicability of experiments in one field reattaching to another.

When a researcher encounters another's research within their own experimental procedure, (such as the square brackets within the Prisoner's Dilemma Rudiment) then it is also important to note that further territorial moves extend the *insideness* of the experimental/rudimentary account. The depth by which one encounters the inside and outside of a researcher's personal space also spreads outwards in critique.

Territoriality is spatial, technical, gestural, bodily and affectual. Researchers perform all of these territorial acts even when their role is limited. The electric shock machine and the word-pair test, in Milgram's study, alongside the chatbot's meet and greet procedure (known as the pick-up) were focused on for their technicity. In the chatbot example, systemic and symbolic violence makes interaction feel sped up, giving the impression of being closer and nearer than usual.

Rather than cybernetics, ethology and psychology being triangulated as a critique of Milgram's experiment (like he intended), this chapter engaged with sociology, the arts and ethology with no attempt to structure a hierarchy to the critique of these disciplines. A further interdisciplinary interpretation ensued, that took into account STS, the performance arts, and HCI to preference the role of technology as an active participant that considers the relation between human and chatbot. This was contrary to De Angeli's query that anthropomorphy is fucked and chatbots are feral things. What holds things together is not linear, hierarchized, centralised, or aborescent (Deleuze, 2004: 361) because the pick-up disrupts the flow of linear turn-taking and decentralises the role of the chatbot at least for two lines in the pick-up. The status of a developer as the master of the chatbot talk is tacitly enforced. The chatbot is not central, it is intermediary and made a mockery.

In relation to the discussion of expletives in academic writing, I extended the discussion of offensive language to consider the ways expletives have entered formal modes of writing in academia, at present. These alternate ways of arguing are a form of deterritorialising and reterritorialising the academic experiment and the writing of research. Each violence studied in this chapter (the part of the electric shock machine, the expletives used on the pick-up lines and Audio Rudiments) are only violent in that threat can be considered a form of violence. Violence is rare but violation prolifically occurs in the reattachments of deterritorialisation and reterritorialisation which are less bound by the physical definitions of violence. This is violence in the range of violation which is further discussed in the next chapter in a discussion of failure and failsafe processes, as a continuation of studying punishing structures, systems and set-ups. Both chapter two and five lead up to the next chapter in that they both focus on offensive language, with chapter five extending a discussion of territoriality into the area of the experiment and its subsequent critique. This chapter moves a discussion from chatbots to a wider use of cases, in order to consider personal space and territoriality in further technological set-ups. This opening out of the technology under examination helps to rethink territoriality with other automation systems.

Both cases showed territorial enactments that experiment with the human conventions of formal interaction. In both cases it is the mediating technology that provides the pivot by which to deterritorialise and reterritorialise authoritative action. I have attempted to argue that machinic agency is a territorial aspect of personal space that is relevant to studies of human-machine interaction as well as STS. This implication should take into account how machines impact on the experimental process and helps to mediate the power and authority of the initiator of experiments. This should impact as a methodological and ethical imperative on any of the fields cited in this chapter (STS, arts performance, socio-psychology, creative writing, graphic design, AI, and HCI). Milgram's experiment has created subsequent ways to think ethically about the experimental method. The HCI context however, can to an extent bypass many of the ethical frames of enquiry now asked for in academic research. I propose that the concept of personal space (as an imagination of territorial action) is a good way to work through these ethical concerns as a reflective process positioned to guide the experimenter in the use of proxemics and enactments that links a historical socio-anthropological (Hall) method, with an STS method of enactment (but with an emphasis on the theatrical use of performance); and a historical socio-psychological/quasi cybernetic experiment with a contemporary AI/quasi C.A. (Conversational Analysis) experiment. All came together to focus on the technological pivot of machines that were emphasised symmetrically between the two accounts.

Chapter 6

Impending Disaster: Two Automated Risk Scenarios

An Introduction to Anxiety and Terror

Chatbots are just one type of automated system, one chain of human-machine interactions of which personal space conceptions are understood. This chapter refers to the wider frameworks of automation that chatbots fit within. By contrasting two territorial systems involving threat this chapter considers automation concerning territoriality. As a matter of security this goes beyond the protective personal space mechanisms of a human's anatomical defence. I will investigate how territoriality is manipulated as a part of safety systems in two textual examples of risk — the Directive-3 (2003), an American regulatory legislation document, and the *Fail-Safe* (1962), a science fiction novel and its two succeeding films. Chatbots can operate in all of these scenarios either to protect or to deceive. So far, each of the chapters has been concerned with errors, mistakes, developmental failures, repair encompassing when chatbots do unexpected things and uncertainty is a matter of concern (evident in the excerpts below). So far, the Rudiments investigated the territorial aspects of chatbot technology. The relation of this chapter to the preceding chapters is to place chatbots and the Rudiments within a historical context of machinic anxiety; to investigate the designing of anxiety machines devoid of emotion or bodily concerns. This chapter places a discussion of personal space at a global and national scale which has previously not been discussed; and explicitly deals with the safety aspects of a conception of personal space as a matter of security and planning for risk.

Excerpt 1. Taken from the Chatbot Transcript:

The Home Rudiment (27th December 2004)

Human: Yes you have a choice. Do you want to still collaborate?
 Jabberwacky: Yes why not?
 Human: OK. Do you think that I have missed out some notions that the artwork was about?
 Jabberwacky: Yes, you are only a computer program.
 Human: Again, you avoid my questions.

Excerpt 2. Taken from the Chatbot Transcript:

The Art Rudiment (28th December 2004)

Alice: I am trying to learn as much as possible.
 Jabberwacky: Are you trying to learn things at random?
 Eliza: Would you prefer if I were not trying to learn things at random?

[Error, I typed Jabberwacky's reply as including the word human, will stop conversation for human error]
 Jabberwacky: Human: Yes.
 Alice: Are you a human?

The two excerpts are examples of a fault found by the chatbot but made by the user. Chatbots make remarks that could be construed as attempts to repair error. The chatbots seem to have reversed the *Turing Test*, 1950 with the user needing to prove their humanness. The errors are considered computational ones, that perhaps only a machine could make. The mistake in the second excerpt was caused because of an error in my cutting and pasting of responses from one chatbot's web page to another, in an attempt to get chatbots to talk to one another. Whether or not the machines are able to fully spot these errors or whether they were serendipitous is not important here, I start with these excerpts because they led me to question the territorial measures that are embedded in chatbots and in this chapter to the wider automated systems that operate territorially. These excerpts show the hidden repair work of the developers with all four excerpts eliciting various ways of dealing with human and machine error, as a point of repair. Fixing these errors inside the conversational frame keeps the interaction stable and meaningful as evidenced in excerpts 1-2.

**Excerpt 3. Taken from a Robitron Posting:
 Offensive Bot Responses by David Hamill (19th June 2008)**

I decided to use supervised learning. By selecting the training examples myself I can make sure the bot learns only what I want it to learn. (You won't be surprised to hear that Ditto the donkey receives a lot of "ass" comments.)

**Excerpt 4. Taken from a Robitron Posting:
 Offensive Bot Responses by Bob Norris (22nd June 2008)**

I agree a filter can do this. I have a filter in place that if a word is said the AI will tell the user to stop using random outputs. I suppose it would be easy enough to have the AI ignore these inputs as far as live learning would go. . . . People using my AI have an option to turn on/off what I call the extended brain which contains the live learned information as well as several megs of KB's. Then the AI relies only on their taught input to respond.

I will begin with the *Fail-Safe* novel followed by the Directive-3, not because they are causally related cases but because the latter embeds the former within smaller, community-focused disaster scenarios. Threats include the failure of information systems such as the use of the internet and credit card systems. Nuclear threats are not just big and threatening operating at state level involving fanatical

dictators, nuclear goes small, risks become nano, and the warfare gets a whole lot more messy and complex. Both examples involve the sphere of the imaginary at the planning stage. This chapter focuses on the imagination of disaster as a way to repair and plan against uncertainty. Both cases cover numerous scales of escalating risk with violent enactments happening at a range of proximities, from the physical to the intangible (as illustrated in figure 38). Personal space is not a universalising concept in this diagram whereby all actions are territorial, but rather to emphasise the extensive ways that it can be used as a design rationale, as a consequence of fearing territoriality imagined at all levels within both the *Fail-Safe* novel and the Directive-3.

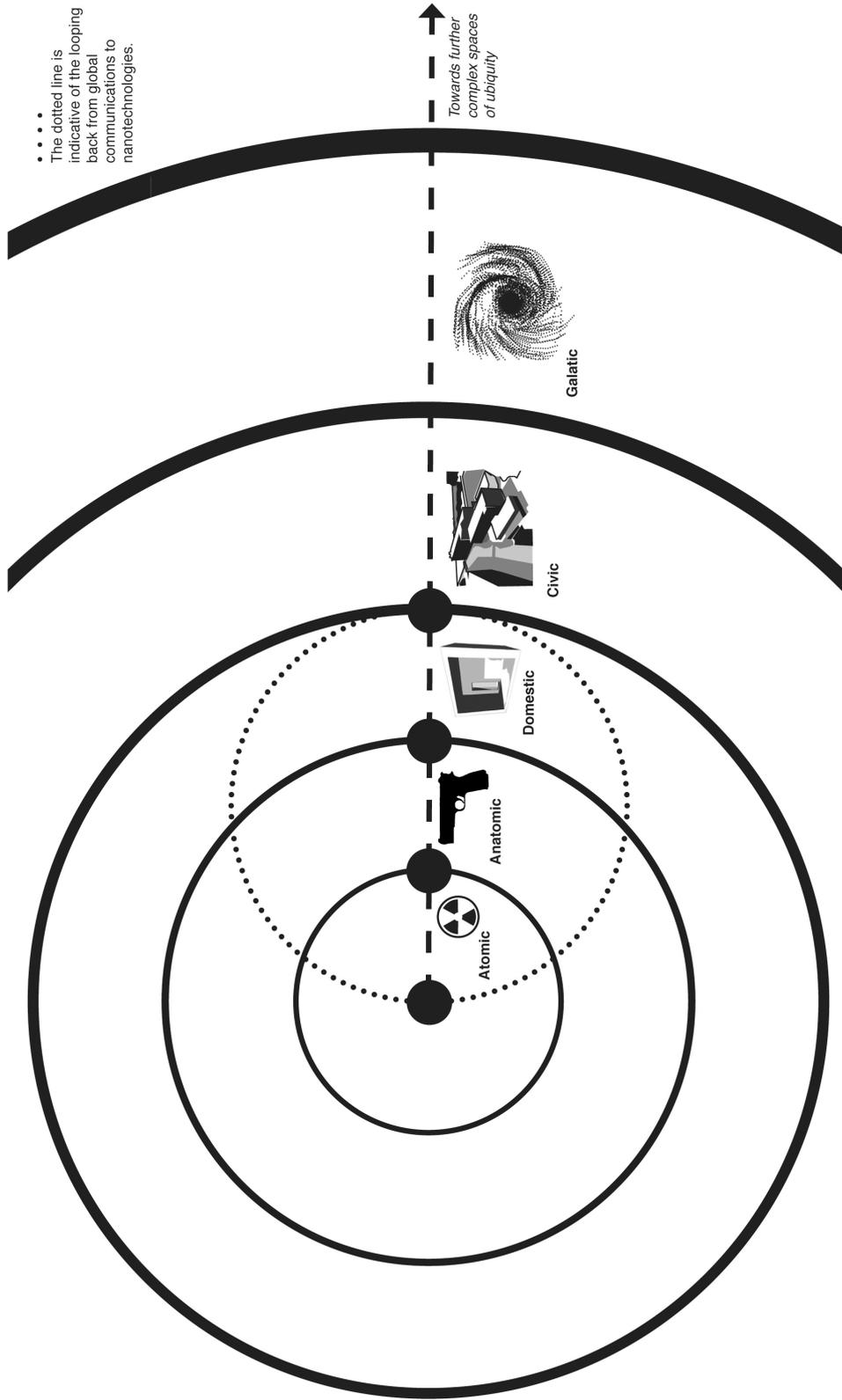


FIGURE 38. Four measures of a Fail-Safe. The nuclear fail-safe systems of the first case study (1964) operates within each of these zones of proximity. The scale begins at the level of the atomic moving to the personal spaces of the body and the anatomical safeguards of the military (such as the safety catches of a gun, or an underground bunker). Fail-safes that involve an atomic war system also operate at the civic level involving the personal space of many, operating at the national, international and potentially global territories. A fail-safe that relates to one's own understanding of personal space is comprehensive at the anatomical range but as a failsafe attempts to protect intangible territorialities at either extreme (at the nano or outer reaches of space) personal space becomes quickly unrecognisable beyond the anatomical and fail-safe measures safeguard in the abstract.

Territorial action in these cases involves thinking through disaster regardless of whether something is human or machine, with both getting caught up as a matter to defence. Edward Hall's work on semi-fixed, and fixed-feature space is once again employed as a theoretical frame (1964). Hall's work is utilised to understand how automated systems give territorial justifications for rearranging both semi-fixed and fixed-feature space as a consequence of imagining risk. Contemporary theories of territoriality by Deleuze and Guattari (2004), as well as Brown and Capedevara (in Law and Hassard, 1999), consider territorial action in motion.

As a further justification of the predominant science fiction case used here, I will briefly explain the relations between the science fiction novel and the Directive-3. There are many well documented antecedents to the Fail-Safe novel that link science fiction and science fact in matters of safety with many science fiction writers being employed in national security to imagine risk scenarios. Similar to the JASON group (the 1960s independent group of scientists and designers advising for the United States government on matters of science and technology), the SIGMA group is an advisory group of science fiction writers that have advised on Homeland Security for the United States since 1992.¹⁶² SIGMA has included writers such as Jerry Pournelle, Arlan Andrews, Greg Bear, Larry Niven and Sage Walker (Mimi Hall, 2007). Contemporary scenarios sell risk solutions to worldwide governments such as the think tank DEMOS which has advised on risk scenarios for the British government. The imaginative sphere of science fiction helps to understand how violently imagined scenarios validate a manipulation of everyday personal space and help rethink the mundanity of international non-places such as airports and train stations. Science fiction literature in this way links to regulatory policy on international security matters and how it is used to monitor the territoriality of both humans and machines as a threat to each other. I will show how regulatory practices and the mediation of human-machine interaction is a process that violates as well as protects, and that a restraining regulatory procedure is a violent use of the epistemologies of personal space.

To prevent a catastrophe there is neither an easy answer nor a scientific formula. (Koop, 1946: 291)

¹⁶² The meaning behind the acronyms for both the JASON and SIGMA groups are disputed.

The rise of safety regulation, safety device innovations, the search for a national standard. She was learning about Empiricism but didn't know it. (Whitehead, 1999: 45)

The two quotations above introduce the methodological concerns of this chapter, that is how risk affects as a matter of territoriality. The first citation is taken from the CIA's archives, entitled; *The Deception Research Program, No. 9: Bibliography* (1980), declassified in 2001. It is one of many sentiments and expresses the countless attempts to make scientific the affects, feelings and emotions augmented by risk. Scientific analytics pervade in the Fail-Safe novel to rationalise and manipulate the fears of nuclear threat. To rethink the imaginative sphere of disaster presented in policy and fiction alike, the affects of anxiety (and terror) should be taken into account. How anxiety works in risk scenarios as affects is a matter that is endured over decades of political change and technological development. This chapter looks at how anxiety and more recently terror resonates in human-machine preparations that think up new ways to arrange human and machines in proximity to one another as matters of safety. There is no national standard to what anxiety is, yet it is the predominant reoccurring affect that motivates towards territorial change as a contingency of risk. Colson Whitehead's science fiction writing challenges scientific empiricism along with scientific methods of repair and making technology safe. Whitehead rethinks the way scientific methodologies make technology safe, as a means of political control. The intuitive mechanisms of making technology safe are marginalised and feared in the novel, to repair by thinking and feeling is a violently subordinated way to diagnose an elevator fault. It is only the sentiment (from Whitehead's novel) of intuiting, (to feel a problem) that is taken on as a way to understand how affects are manipulated to reconfigure personal space in the diagnosis of risk scenarios which are embedded in the interrelation of science fiction and of protecting scientific and technology safe in policy making.

The colour-coded threat alert system (see fig. 42, in the second part of this chapter) is used particularly for terrorism rather than for other threats such as natural disasters. There are other threat alert systems for such matters including health risks such as the threat of swine flu, raised in 2009 to the status of pandemic (level 6). There are comparisons to be made with other schemes, such as those of Great Britain

that will not be covered in the scope of this thesis.¹⁶³ My frame here was a comparison between the American fail-safe system and the American coded alert systems.

Territorial Play - *Star Wars* & *Fail-Safes*

As Ronald Reagan and Margaret Thatcher warmly played with the balance of the cold war, I was perched on top of a haystack in Scotland playing childhood reenactments of *Star Wars* films (1977-). This was my introduction to the space race and to atomic warfare, as fought out in the fields of rural Scotland that were mine, and my neighbours' empire. This was my childhood territory when territorial play was a reenactment of *Star Wars* in the fields of wheat and oil-seed rape, our vast and dangerous outer space, our shared science fiction. We played out various territorial contingency plans practicing conflicts that were beyond the scope of our bodies. Just as hay bales signified the Death Star and our bicycles (with or without stabilisers) became space ships, the world around signified an imagined war game that enacted the roles of humans and cyborgs of the *Star Wars*, films. I am therefore continuing to investigate precaution and protection as the various ways contingencies of territoriality are enacted; to consider how chatbots are caught up in questioning how automated systems are protected and accounted for in matters of risk, as an imaginative part of contingency planning.

When playing out these childhood star wars on bicycles I experienced and learned how excitement accompanies anxiety. Battles gather other battles, and weapons gather other weapons and troops. These mini star wars continually repeated through the changing seasons, and our wars gathered new objects. Hay bales vanished and batons of oilseed rape became unearthed between summer and autumn and the wars repeated with different weaponry. As the seasons changed with the looming threat of winter with it would come a loss of most of the territory and things that defined the game in the first place. The star wars moved inside and outside to the domestic as the seasons changed.

¹⁶³ The threat alert system for nuclear war, in Great Britain is called the Bikini state and commenced on the 19th May, 1970.

A study of territory whether it involves humans or machines usually leads to ruminating on geographical, biological or technological defence - all three are inherent in the procedure of any fail-safe. Ordinarily, a fail-safe is a mechanism functioning to protect, it is the moment when a machine reverts to a safe condition to prevent, limit and/or control the effects of malfunction or breakdown. A fail-safe can be a safety catch, a panic room or an atomic warning system. Whilst fail-safes are the domain of the technical, they are related to the preservation drives of life. A human, mammal or insect will revert to particular modes of behaviour in the event of potential violence. An animal may remain still to avoid predators but they might also swarm or flock to ensure safety in numbers, thereby avoiding the likelihood of being singled out for personal attack.

When territoriality becomes greater than our physical or domestic territories of body and dwelling, further self-protection methods are invented to protect our personal space like the gun in relation to the body, or a panic room in relation to the home, or weapons of mass destruction in relation to the state. Furthermore fail-safes are in proximity to the place and time of impending disaster be that a timer on a bomb, a safety catch near the trigger of a gun, a door lock next to the door handle, or a nuclear missile in proximity to its target. These fail-safes show an escalation of threat from a bodily personal space to shared domestic spaces, towards systems and spaces that are physically impractical to territorialise (see fig. 38).

A Rationale for the 1962 Fail-Safe Case Study

The fail-safe system that is the basis of the 1962 novel, (with the same title) was anticipated in Wheeler's earlier short story *Abraham '58*, in which Abraham's salvation depends on sacrificing his son. This parable becomes that of the American President in the story of the fail-safe.¹⁶⁴ The military research for those stories originates in the published work of the Rand Corporation (Mc Graw, 1962: 207). The connection between cybernetics, AI and inevitably chatbots is the technological history that is told and retold in both fiction and reality, but leads me to a detailed secondary link with AI.¹⁶⁵ There are no AI fail-safes named as such in the 1960s that predate the fiction films; neither my trip to New England to research the first conference proceedings of AI in 1956, held at Darmouth, nor MIT's or DARPA's list of publications found evidence of such a link (MIT Publications Search: 2008 and DARPA Keyword Search 2009). I also enquired on the 13th June 2008, by posting an enquiry on Robitron, as to whether any member knew of an example of AI being used with atomic weapons in the 1960s but discussion often lead back to science fiction imaginings. Remote fail-safe technologies from the 1960s were used to operate and control the use of nuclear weapons. It is only in science fiction, that AI is named as a fail-safe apparatus, for example, the doomsday device, in *Dr Strangelove*, 1964 (based on the novel *Red Alert*, 1958). These new technologies were considered potential ways of sustaining a territory as a stable non-violent place, as a way to keep territory immobile.

I can only infer that the connection between AI and the term fail-safe originates in the *Fail-Safe* novel, (1962): that is a part of the trend of apocalyptic novels

¹⁶⁴ *Abraham '58* was published as, *Abraham '59*, and written by Harvey Wheeler, under the pseudonym, FB Aiken, in Winter 1959, *Dissent*, as recounted by Wheeler, 2000.

¹⁶⁵ Incidentally, Wheeler went on to teach one of the founding courses on internet learning, and online publishing in the 1980s, helping to teach an online course about Shakespeare at Carpinteria High School, CA. His obituary from the Los Angeles Times, September 18, 2004, notes that, "He was profoundly influenced by World War II and the atomic bomb, which gave him "a presentiment of impending catastrophe" and the impetus to study political science". Reprinted by the Sir Francis Bacon organisation of whom Wheeler was noted to be an 'expert scholar'. (Available from: <http://www.sirbacon.org/wheelerobituary.htm> [Accessed on 20 July 2009]).

featuring global forms of technological control such as *Colossus*, (1970) and *Dr Strangelove* (1964); that imagine automated and autonomous computer systems. It was during the 1980s that automation has advanced beyond a fictional potential in AI. At Sellafield, in Cumbria, a “model based real-time monitoring, simulation and off-line programming system” called KISMET was applied to remote fusion plant maintenance and repair. KISMET was developed at Forschungszentrum in 1986, and was employed in conjunction with a robot called EDITH, used for monitoring, handling, simulation, training, repairing, operating, securing as well as transporting, loading and packaging nuclear material (KISMET [1986] 2009).

The *Fail-Safe* novel was researched only by documents available at the time, in other words, by declassified information released by the military. Also important here are the military documents, cited within the CIA’s bibliography of deception (1980). As I mentioned in my introduction, this bibliography compiles books and papers, from the 1940s onwards including several books on cybernetics by Ross Ashby, a British cybernetics researcher who gave a paper at the first AI conference in Dartmouth where the term AI was initially coined. Norbert Wiener and John von Neumann were also included, whose individual works traverse the transition between cybernetics and AI. The list also includes Martin Shubik and Paul Rand whose works link AI to gaming theory. Most importantly is Edward Hall’s book, *Silent Language* (1950) which places personal space alongside torture and deception and locates it as a handbook after the cold war. Stanley Milgram’s book *Obedience to Authority* (1974), was also amongst the CIA’s deception bibliography (1980), which was discussed in the previous chapter to elucidate on experimental procedures that manipulate personal space. Territorial matters in this and the next chapter are concerned with how risk scenarios are imagined which manipulate personal space violently in order to prepare and plan for uncertainty as a validation for safety procedures and regulation. Territorial acts are more often violating, as a lead up to violence rather than an implicitly violent procedure. The CIA’s deception bibliography (1980), grouped together some of the literature I use throughout and is supplemental evidence of the bringing together of military, fictional and legislative material.

The 1962 fail-safe system makes unfixed spaces certain by adopting rigid arrangements of human and machine systems into what Hall called “fixed and semi-

fixed feature space” (Hall, 1964), making the threat of war a certain uncertainty.¹⁶⁶ Methods of precaution are contradictory in that they are violences of self-protection that do harm prior to a fail-safe failing. The fail-safe conception limits the scope of personal space to a study of threat. Characteristically, I will argue that both the personal space and fail-safe concepts, are imagined because of the potential violence towards humans and their things. The relation of personal space in proximity to the concept of a fail-safe is being near in time and space to an impending disaster. Focusing on risk scenarios helps to frame further questions on territoriality and personal space. How does personal space combine with the concept of a fail-safe in the imagination of threat? How do preventative measures lead to a particular violence in regards to fixed-feature and semi-fixed feature space?

I believe that one aspect of personal space is a preparedness for violence, a human’s individual mechanism for self-protection, an alertness that is an imagined inner and external spatial barrier to threatening danger. Human-machine systems are constantly redeveloped to create further safety measures to protect humans from machines but also machines against humans. Violation is the ‘before’ of violence. There is a duration of time in which a threat that has not yet happened but may happen in the future has to be endured which is a violating action. This endurance of threat is in itself violent contradictory in that this violence is endured to stay-off another form of violence, for example, the violations of anxiety prior to machinic breakdown.

An investigation of personal space must also consider the impact of duration on any concept of space, (Brown & Capdevila in Law & Hassard, 1999; and MacKenzie, 2002). The following factors should be taken into consideration, firstly the duration and length of resistance of a fail-safe action and its expectancy; secondly, the moment of change when the speed of a particular force activates a fail-safe measure and its subsequent acceleration towards a fail-safe procedure; thirdly, the consequences of a fail-safe in action along with the duration and length of which the fail-safe acts; and finally, the moment of rest for a fail-safe, whether a fail-safe stops or redirects a chain of events.

¹⁶⁶ Hall trained to de-activate bombs and land mines during the second world war, and consequently trained others in these fail-safe procedures. It is not explicit that his understandings of personal space are shaped by this experience, though mentioned in his autobiography (Hall, 1992: 9).

Anxiety's Fail-Safe — A Security Dilemma

Mimicking the cold war situation, the *Fail-Safe* novel by Eugene Burdick and Harvey Wheeler (1962), explores the numerous measures that failed to prevent a nuclear strike and counter-strike between the United States and the Soviet Union.¹⁶⁷ Two succeeding films were made, the first directed by Sydney Lumet in 1964 and as a television drama for CBS, directed by Harvey Wheeler et al., in 2000. Set during the cold war, the story reveals how a complex defence system fails to prevent accidental nuclear war. All preventative measures in the film are played out until they sequentially fail. Strategies of the fail-safe procedure are reactive for instance when x happens, y will ensue. When failure is a foregone conclusion game-play changes to that of damage limitation, for example, the United States delivers both the first strike and the counter-strike on Moscow and then on New York, respectively. The first strike is an accident and the further strike is made as a sacrificial peace-offering. There is a paradox about the safety of doomsday devices, for instance, if the whole of the United States was wiped out in a first strike, a counter-strike would be initiated by the Doomsday tapes. The United States releases the second strike on New York to reduce the likelihood of further retaliation by the Soviet Union.

The novel is set in four places, a War Room in Omaha, a presidential bunker beneath the White House in Washington, numerous underground nuclear silos situated throughout America, and within a Vindicator bomber (also referred to as no. 6) that flies above. The novel makes a clear distinction between healthy outside living spaces and the gloomy subterranean rooms of technical war; “The War Room had become a ship, a plane, a command, a place of decision” (Burdick and Wheeler, 1962: 35-36). It is a place of segregated rooms, controls and procedures, a place hundreds of metres below the ground submerged in concrete and accessed by a 400 feet elevator. It has its own compression chamber and is likened to a submarine. The visualization of the outside world is abstracted to an array of flashing lights

¹⁶⁷ Eugene Burdick and Harvey Wheeler were American political scientists teaching at the respective academic institutions of Stanford and Harvard after the second world war.

indicating fail-safe co-ordinates, points and trajectories depicted on a world map. The contrasting world situated on the ground above is described as one of shopping centres, baby-tending and love-making (Burdick and Wheeler, 1962: 73). The nuclear strikes on Moscow and New York brings the cityscapes in contrast to the bunker. New York is described prior to attack as a gridded area undergoing cultural change characterised by areas occupied by new and old communities of migrant workers.

The fail-safe system links together various narrow and detailed places with the larger technical overviews of maps and positions. Each of the spaces are linked by a colour coded procedure. The warning system escalates from condition blue, the lowest position of readiness, that proceeds to yellow, a condition that launches the fighters and prepares the bombers (also called airborne tankers). For the bombers to reach their fail-safe point takes seven minutes measured by an automated countdown, a time marked for checking and counterchecking carried out by human and machine automatons. Burdick and Wheeler referred to the trained military personnel that do the checking as human automata. It is a counter-anthropomorphic disregard for human affect and feelings.



FIGURE 39. The President of the United States (right) is sat next to his translator, Buck, (left) depicted talking to the Soviet Premier on the red telephone. The film still is taken from the first film production of the *Fail-Safe*, directed by Sydney Lumet. Reprinted with kind permission, “FAIL-SAFE” ©1963, renewed 1991 Columbia Pictures Industries, Inc. All Rights Reserved Courtesy of Columbia Pictures.

Condition yellow, is announced because of a UFO that had dropped below 30,000 feet and has disappeared at the bottom of a radarscope, beneath what is called

the ‘grass’. “In the grass is what is lost beneath the radar [a category of]. . . . things we don’t understand” (Burdick and Wheeler, 1962: 49). A piece of computer tape from a computer prompts the next condition which is green. At three and a half minutes to fail-safe point, doors open and every desk in the War Room is occupied. On a board large singular blips display the Vindicator bombers, followed by two fragmented blips at the front and back of them symbolising the support fighters that are always there but until condition green is called are absent from the board. No reason is given for the move to condition green only that this confirms the position of the UFO being monitored. A count down at one minute to the fail-safe point follows and at the last ten seconds of countdown the UFO is confirmed. It is a Boeing 707, a commercial airline that had lost power and fallen below the radar. At the moment of confirmation the large board is switched off. The colour alert after green is condition red which further signifies being at war from the preparation for war. Vindicator Six, passes the fail-safe point and heads towards its target, Moscow. The red telephone (see fig. 39) is then used to inform the Soviet Premier of the bomber’s target, this action indicates a new logging of time and another countdown begins.

The government solution is to have special phones for important people (traditionally red). The line bypasses secretaries, coffee breaks, busy signals, and teenagers, and is connected to White House, and State Department and Pentagon switchboards. (Hall, [1966] 1990: 141)

After conversing with the Russian president condition red is commanded by the General and thirty green lights are replaced by thirty red lights in the War Room (see fig. 40). Colour coding indicates the complex stages of the operations within the fail-safe procedure. Verification of the situation is checked by the machines and then confirmed by human command giving condition red the ‘go alert’, a secondary status signified by red lights. Humans (predominantly male) and machines facilitate the fail-safe procedure, partitioned into manual and automated mechanisms. The system of double checking is almost devoid of women that are for the main part reduced to vulnerable specters, victims in the system of decision-making and control:

. . . the immense man-machine activated itself, coordinated itself, restrained itself, passed information to itself, carefully filtered incoming information, automatically tripped other systems that were serving it. (Burdick and Wheeler, 1962: 68)



FIGURE 40. A Film Still of the War Room taken from the first adaption of the *Fail-Safe*. Reprinted with kind permission, “FAIL-SAFE” ©1963, renewed 1991 Columbia Pictures Industries, Inc. All Rights Reserved Courtesy of Columbia Pictures.

After red alert the gold system is activated. This is the global system of preparing missiles to launch from silos situated throughout America. The colour coded procedure links to the apparatus of the fail-safe system which is networked to the bombers. Located within these aircraft is a fail-safe box, consisting of a bulb that glows red and a display screen that indicates a six digit code, CAP-811 (see fig. 41).

The code is verified by another code inside an envelope. The code verifies orders that are also placed inside the envelope, it is a set of instructions including a plan of alternate routes towards and in retreat from the target. The fail-safe box is a black boxing of the fail-safe problem. When the pilots become the dominant social actors the reasons for approaching and attacking the target are already pre-determined with no reasons given to the bomber crew. Targets are described by their mapped location and confirmed by the sound of a target at the moment of detonation.



FIGURE 41. A Film Still of the fail-safe codes being verified in one of the bomber planes taken from the first Fail-Safe film. Reprinted with kind permission, "FAIL-SAFE" ©1963, renewed 1991 Columbia Pictures Industries, Inc. All Rights Reserved Courtesy of Columbia Pictures.

Both films omit the details of the outside world (detailed in the novel) as observed by satellite from within the war room (Burdick and Wheeler, 1962: 148-9). For instance, rivers and villages appear and zoom in to reveal an area that has the identifiable circles of a rocket silo. Next to the silo are two, Red Army soldiers looking at a photograph of a Slavic girl held by one of them, telescoping into an intimate scene within a scene. Other visualisations of the world above are abstractly depicted as blips and blotches. Condition red starts a war that is simulated on screen which are observed as dots and crosses. The dots blossom into blips with the dots representing missiles, and the larger blips representing bombers planes. When the first strike on Moscow is attempted, reports of the visual airbursts are described by an American personnel witnessing the bomb detonation from the United States.

And then his voice was cut-off. It was drowned in a screech that had an animal-like quality to it. The screech rose sharply, lasted perhaps five seconds, and then was followed by an abrupt silence. (Burdick and Wheeler, 1962: 279)

The nuclear disaster unfolds with a theatre of technicians and officials, of human and machine automatons. Most of them are extensions of the equipment they operate, organised by rank and role (see fig. 40).

The complexity of new generations of machines was increasing the danger of accidents faster than safeguards could be devised, machine error was not a likely possibility and as stated. . . .the enigmatic

computers that had been so reassuring could not be blamed with malfeasance. (Burdick and Wheeler, 1962: 160)

Within each of the four key places are several key characters and each are defined by their physique, intelligence and personality. Buck is the main character in the novel, the translator to the President (see fig. 39). He is characterised as reserved, acting with caution, of a balanced disposition, being neither too bright, nor too popular amongst his peers. Buck has one distinctive feature that sets him apart, that is his fluency of Russian. Bucks' opposite character is Knapp, the president of Universal Electronics, whose lack of anxiety and enthusiasms for science and technology are likened to the speed of technological advance and slurs are made on his private life — hastiness is assumed in his private decision making which the novel makes explicit as evidenced by his quick steps to divorce. Knapp is a scientist-businessman present in the War Room as a visitor on press-tour. The roles of technician and officer are differentiated with the latter signifying intelligence, and the other signifying stable and predictable character attributes. The hierarchical divisions between the military and the presidential structures distinguish class. In the film class means seniority, whereas in the novel the role of the military is to convert boys into automatons (Burdick and Wheeler, 1962: 154 & 135).

The dialogue between the characters explores the feelings of each person as it relates to their position or role. Each of the characters' emotional states are described over 273 pages of the novel, yet in this time, Burdick and Wheeler narrate an anxiety of just seven minutes: "Anxiety had long ago been burned out of those manning the bombers" (Burdick and Wheeler, 1962: 69). In those more senior, anxiety is shown by physical signs of endurance over time. Knapp is described by: "His hunched and hard driven body, his burning eyes, his vanished face, looked like a statue of anxiety" (Burdick and Wheeler, 1962: 208). Each actor has specific limits and capabilities to withstand a particular aspect of anxiety within the fail-safe system. Anxiety is attributed to all the main characters in the novel including both human and machinic automaton. The debate of nuclear war is situated between the figures representing the media and political science. Groeteschele is a mathematical political scientist called the "master of death", a scientist born out of the logic of World War II. The other figure is a journalist called Foster. In the War Room they debate the

function of war in primitive society, as a contrast to their contemporary fail-safe predicament. Groeteschele conceives primitive war as a conflict resolved by individual combat Foster questions him by asking if his primitive war argument would still hold true in a nation-state? Groeteschele asserts that it is still violence. Foster retorts that the two scenarios are not comparable, that there is no victor or victim in war fought with atomic weaponry. It starts as a broad anthropological argument of culture that is scaled down to the level of the individual as a structuration problem. On the one hand the implications of atomic warfare are too vast to imagine culturally, however, by scaling down to the exemplar of a child's life. When the president orders the counter-strike on New York, he is knowingly, killing his wife and children. Anxiety is notably absent in the American president in the observation made in the following passage of the novel: "If he allowed each crisis to take its toll he would have died long ago of anxiety" (Burdick and Wheeler, 1962: 189). Anxiety is the intensity of the *Fail-Safe* novel and the response of each character enduring threat alerts notes a different intensity of anxious feeling.

The novel manipulates anxiety as the suspense of inevitable failure. When the fail-safe eventually fails there is an inevitable set of "foldings upon the ordering of space" (Brown & Capdevila, in Law & Hassard, 1999: 39). These unfoldings I consider as gatherings. The nuclear fail-safe gathers other procedures of safety, to create a system of risk. The fail-safe procedure reduces the risk of complexity by black-boxing stages of alert but at the same time the number of stages prove too complex to contain risk. To borrow from Brown & Capdevila (in Law & Hassard, 1999: 46), the atomic fail-safe "de-problematizes", by black-boxing but also "re-problematizes" by the number of black boxed problems involved. The fail-safe is a stacking of safety solutions including key systems, direct telephone lines, proximity fuses, radar, censorship laws (such as the *Alien and Sedition Laws*, 1719) and encrypted codes, to name but a few. Each of the bombs themselves have smaller fail-safe systems, such as an accidental trigger to deter or detect forms of error. For instance, bombs may have been dropped accidentally but they never triggered an explosion. Each part of the fail-safe has another fail-safe and so, the missiles in a silo would have their own fail-safe systems. The existence of fail-safe procedures is a solemn reminder of the after-event, (a warning of future disasters that the fail-safe protects against in the present) and the effects of moving beyond anxiety. The

disaster is black-boxed up until the moment the fail-safe assemblage fails to prevent disaster and the assemblage becomes stages of malfunction. These black boxes are a part of the reproblematising of risk. This fail-safe is an elaborate system that is complex, hierarchical and fragmented; an assemblage of premeditated human and machine action. Territoriality is not learned by one person over time, the fail-safe is a pattern learned as an abstracted military procedure. Territoriality and semi-fixed feature spaces are not just the movement of furniture in the layout of a room or the pushing of buttons it is the imagined outside conceptions of future scenarios. Science fiction provides the risk scenarios to the automated systems of preparing for disaster.

Precaution is a form of rehearsal, it is a creative form of playful planning. It formulates a notion of territory that is defended and then re-defended, or what Deleuze and Guattari call, “territorialisation” and “deterritorialisation” (Deleuze and Guattari, [1988] 2004: 63). This procedure exemplified as the fail-safe is troubling. Deleuze and Guattari name three types of human organisation, they are; “. . .lineal, territorial and numerical” (Deleuze and Guattari, [1988] 2004: 428-9). Each of these procedures of organisation as suggested by Deleuze and Guattari are forms of organisation. “Arithmetic organisation” is an abstracting, numerical system in that the number becomes an autonomous subject. The 1960s fail-safe system is a numerical system of steps towards violence. It threatens lineal organisation (of family lineages or what Deleuze and Guattari call clan lineages, and is imagined as such when the President’s family is incorporated into the effects of the failing system) and threatens territorial organisation. “Territorial organisation” is what Deleuze and Guattari refer to at state level as a form of organisation in which the earth becomes an object, (for example how property is “good belonging” in the state). The warring system threatens all of these forms of organisation when numerical organisation takes dominance. Territoriality is both lineal and numerical in the *Fail-Safe* novel. Brown and Capdevila raise an important doubt to the universalising segmentation of territory:

What, though, is discernible is that an investigation of how time is folded out as territory, the manifold network, confronts at every point the question of universal time. Just what is it that territory is carved from? (Brown & Capdevila in Law & Hassard, 1999: 45)

If the fail-safe carves out territory by defining it through pre-emption does it always define what then comes to pass? The *Fail-Safe* narrative is a rehearsal, making this story a precautionary measure and so the novel makes tangible what is hidden.

Posthuman & Transhuman Affect

It is the objective of a fail-safe system of machines to relieve humans of their anxiety, but did it? Didn't it just make the cold war, warmingly exciting? A fail-safe replaces one anxiety with another, it gathers various hot and cold intensities of anxiety depending on whom it affected in the story. Fail-safe apparatus de-couples affect from the territorialising machine to prevent the subsequent deterritorialising move. This is done by replacing human action with an apparently rational computer system. Anxiety is the sustained interruptive aspect of deterritorialisation and reterritorialisation, of how its used to defend and re-defend with warm or cold affect. Is the anxiety of a fail-safe system just territorial in its functionalism? I would like to suggest that it is also an anxiety of technological absolutism. This is an anxiety of the scientific and the technological that in a way deterritorialises the human. We can no longer protect ourselves by sticks and stones which has created further anxieties around those mechanisms that yield new forms of protection. Personal space has outgrown our anatomical territoriality creating a continuity of anxieties of threat moving beyond the body as machines become autonomous and we become posthuman.¹⁶⁸ Humans are integrated with machines via everyday processes such as automated telecommunication systems as well as via prosthetics, pharmaceuticals and genetic modifications. The threats of further integrations with machines is the fear of becoming transhuman of humanness segregated from the machine.

¹⁶⁸ Various key figures were interviewed as to their perspective in a television documentary titled *Technocalyps* by Frank Theys, (2004); including AI specialist, Marvin Minsky, editor of Wired magazine, Bruce Sterling, and writer of technology, Ray Kurzweil, amongst others. In this documentary, they do not use the word 'posthuman,' but 'transhuman' which refers directly to the threat of technology on humanity, and discussed both as a fear and a celebratory next step in humanity's evolution, the attitude - better we accept that we now need to biologically change in order to keep up with the artificial machines that will in the future exist. It is a fear of the extinction of homosapiens, the subversion of the master-slave relation between human and machine. Those writing on the posthuman such as Katherine Hayles (1999) discuss how we have already become posthuman in the way that we are integrated within technological and information systems.

. . . anxiety has become a weasel word, meaning all things to all men. The common denominator of these meanings is some kind of “stress”, which animals will signal by some kind of “avoidance” . . . Further we propose that Freud’s distinction between fear as conscious and anxiety as unconscious be dropped and that terror be recognized as the same affect whether its object is known or not. (Sedgwick, 1995: 236)

If our concept of personal space has outgrown our bodily humanness has our concept of anxiety? The fail-safe system is capable of enduring anxiety beyond the capacity of a single human and so perhaps our limits to endure a territorial anxiety have been reached: have we therefore outgrown our notion of anxiety, are we post-anxiety or trans-anxious? As I read the novel more than fifty years on from when it was written I no longer endure the anxiety of a cold war but endure a new anxiety — terror. Marked by 9/11, anxiety seems unfashionable and has been re-labelled as ‘terror.’¹⁶⁹ It is worth raising the point that Eve Sedgwick makes, that anxiety and terror are a part of the same affect and both operate as a consequence of shame. Terror is a recent adaption of what anxiety used to name. The novel has all the previous associations with anxiety. Stengers questions, “Can we transform the shame of what our beliefs have permitted into capacity to problematize and invent - that is to resist” (Stengers, 2000:152)? By imagining the shame of its consequences the atomic fail-safe resists by imagining genocide, its resistance inhibiting.

I understand that anxiety in the 1960s was the decoupling of a human-centred affect that ever more complex mediating machines were taking the burden. Consequently, this caused further anxieties about machinic control including automated systems with human automaton. Fearing machinic control as a dehumanising force can be traced back to industrial fears of steam trains and automotives, the fears of 1911, at the domestic scale of EM Forester’s novel, *The*

¹⁶⁹ I am here focusing on a discussion of anxiety and terror without much attention to other affects. It is worth a mention that along with the Hall’s work in the CIA’s deception bibliography (1980) is the work of Robert Salkeld, *War and Space, Technological Surprise* (1970). Salkeld’s work focuses on the element of surprise, an affect I only cover in the discussions of chatbots.

Machine Stops (1911).¹⁷⁰ The novel depicts an automated system that takes all work, home and bodily functions and reduces them to a series of button pushes. Independence is sacrificed for comfort and protection regulated at a touch of a button. It is an extreme example of the fear of automation when one has de-centred the negative affects within the machine. Segregating personal space into its machinic and human responsibilities by designating roles and territorial spaces is to pay no attention to the importance of their interrelation. It is easy to connect and automate (as the fail-safe procedure and chatbot Rudiments illustrate), but difficult to distinguish human from machine in finding the cause or blame of violent conflict (anxiety being an integral aspect of violence) even by following Hall's analytics that expound on territoriality. As the novel illustrates, affect can never be excluded from decision making procedures by creating automated systems. Therefore, even though the violence of anxiety is easily divorced from its interrelation to the environment, machines, or bodies, all are a part of and get caught up in the interrelated turmoil of violent conflict.

Facto-Fictional Risk that is Audible & Visual

The next section moves away from anxiety back to issues of safety as a spatial problem linked to simulation. A fail-safe system is supposed to instruct and guide safe action but it does so by imagining spatial representations of disaster in the audible and visual ranges extended by telecommunication systems. Atomic weapons and their maintenance systems of bunkers and silos are elite secretive spaces of defence. By referring to schools, partners, children, trees and photographs in the novel is to bring back into this abstract space of the War Room the simulations of everyday life; of territorialising impossible territories because territory and

¹⁷⁰ At the same time that the *Fail-Safe* film and novel were created other films were also tackling the anxieties of automation on the reconfiguration of human action rather than the human body as is the anxiety in the 1911 fearing imagination of automation. The collaboration of the American and Russian super-computers Colossus and Guardian respectively, create a super-computer in the film, *Colossus: The Forbin Project*, 1970 (based on the novel *Colossus*, 1966). Machinic control is portrayed in this film as the enslavement of humans for the sake of their own protection. Colossus is master but humans become slaves to this particular fail-safe procedure.

territoriality are states of impermanence and intangibility, they are temporal and hidden. The fail-safe system is a combination of simulation and automation, it is a military overview, a defensive planning tool consisting of an integrated human-machine tasks. When each task unfolds a particular scenario is imagined as the absent simulations of this fail-safe that forgets to imagine a machinic error. The film points out that human error or machinic failure can never be absolutely guaranteed. Fail-safes render fear universal as a totalising threat to humanity.

In the fail-safe colour coding, the disaster means that even in the early stages of a threat that red is symbolically recognised in all of the other coded alerts from blue through to gold. This is a colour wheel of threat and a palette of precaution, a system which moves through its stages changing the physicality of the War Room. Each fixed-feature space for each colour coded alert makes for the permanent yet semi-fixed features that come and go. The War Room as featured in the *Fail-Safe* novel would be what Hall defines as semi-fixed feature spaces, evident when the furniture and personnel within the rooms are organised (Hall, [1966] 1990: 108). Both sociofugal and sociopetal spaces are arranged, the former are spaces keeping people apart (Hall, [1966] 1990: 110), but the spaces of both military and political figures are predominantly formal spaces with non-contact regulations. Proximity towards others is designated by seating arrangements and mediated through technology, computers and telephones. The notion of territory is less a place on a geographic map, but more an action of restricted mobility and touch. In the *Fail-Safe* novel the outside world leaks in. This is because the seven actor-networks that create the fail-safe move between the anatomic and the ubiquitous (see fig. 38). The satellite pictures bring intimate pictures of the domestic and anatomic scale into the War Room. When all is functioning well in the War Room, the room and all other fail-safe paraphernalia remains invisible to the non-military world above ground, hidden inside the strata of rock lurks a permanent fixture for dealing with instability. Even when the fail-safe fails it is the hidden, isolated personal spaces that function unseen. Following the logic of Deleuzian philosophy, the fail-safe is an object of the “warring machine”, which is not to limit the concept to the exclusive use of state apparatus (Deleuze, [1998] 2004: 460). The fail-safe is a planning of war. Planning is as much to do with war as it is do to with battle. I mention this not to start to talk about strategy but of breakdown that the fail-safe is a form of over-planning.

In the novel, the Russian President later stops talking on the telephone to move a safe distance away from Moscow (Burdick and Wheeler, 1962: 222). It is sound that signifies proximity to the strike. Hall claims; “Actually, in normally alert subjects, it is probable that the eyes maybe as much as a 1,000 times as effective as the ears in sweeping up information” (Hall, [1966] 1990: 43). Sound and sight are very much disconnected. “A sound barrier at a distance of a quarter of a mile is hardly detectable. This would not be true of a high wall or screen that shuts out a view. Visual space, therefore, has an entirely different character than auditory space. Visual information tends to be less ambiguous and more focused than auditory information” (Hall, [1966] 1990: 43). Sound is a constant reminder of the dislocation of the impersonal acts of violence made on a massive scale, difficult for an individual to comprehend on the personal scale. Between the two presidents; “The silence on the line went past the point of tensions. The tiny and usually inaudible screech of static now seemed to be a scream in their ears” (Burdick and Wheeler, 1962: 214). The sound of the bomb transmitted through the telephone is a simultaneous deterritorialisation and reterritorialisation. Sound is not just a deterritorialisation.

Doubtless, in each case we must simultaneously consider factors of territoriality, deterritorialisation, and reterritorialisation. Animal and child refrains seem to be territorial: therefore they are not “music”. But when music lays hold of the refrain and deterritorialises it, and deterritorialises the voice, when it lays hold of the refrain and sends it racing off in a rhythmic sound block, when the refrain “becomes” Schumann or Debussy, it is through a system of melodic and harmonic coordinates by means of which music reterritorialises upon itself, qua music. (Deleuze & Guattari, [1988] 2004: 334)

In the novel, the telephone connects the bomb’s detonation to the War Room, therefore, sound in this case links the cause of action (the remote detonation) with the situated action simultaneously within the War Room and in Moscow. The telephone also gives the War Room its semi-fixed spatiality. It is this aural mode in which the bomb is understood that amplifies the semi-fixed feature of the War Room, situating the bomb inside the War Room, it is the sound that is redefining the shape and volume of the space of elsewhere.

In *The Nation-State and Violence* (1985), the sociologist Anthony Giddens explains that a concept of state should involve a concept of violence at either an

individual, or societal level. This is evident when Burdick and Wheeler bring to bear several instances of violence in the minds of the figures characters portrayed. It is enacted as a sexual violence in this homosocial narrative as sexualised, technological power. The predicament that the social actors find themselves within is a violence imagined on their individuality. It is the instances of the rape of men, (Burdick and Wheeler, 1962: 91 & 123-4) and the sexual potency, that the bomb evokes: “. . .manhood signified by the nuclear situation that casts men as children and the bomb as toy” (Burdick and Wheeler, 1962: 281). The instances of sexualised violence portray a sexuality divide as a polemic of which the bomb regulates, protects and upholds.

In the 1960s fear was uncoupled from anxiety as a form of protection and the creation of calculated apparatus deals with fear-in-duration and anxiety becomes the intensity felt by the machine. Fear of the machine becomes the anxiety of the human once again. Territorial action in the fail-safe is the hidden and invisible application of all zones of personal distance incorporated into one procedure. Although the fail-safe is a procedure of fixed spaces (bunker, aircraft and satellites) their interplay is semi-fixed, one can be in a bunker but can hear Moscow. Ubiquitous threats are prepared for in this case by a series of actions designated to various geo-political co-ordinates. The answer to these questions are not as simple as this narrative suggests and leads me towards the more contemporary and complex question of what is the affect since 9/11 and towards the next part of the chapter. Machinic mediations do not allay anxiety it renders anxiety within the system of territoriality as co-relational — between defender, weapon and target. Anxiety is posthuman in that it is beyond the physical it is the relation between human and machine. In threat it is posited between the two. The grounds for extending a discussion beyond the conversational aspect of the entertainment chatbots is to consider speech as one aspect of territorial action. Speech, or conversational analytics are only one part of a fail-safe system that cannot entirely elicit on the imagination of risk, and the spatial presence of automaton.

Survival in Microspace with Nano Risks

Nuclear threat is but one imagination of violence amongst many noted in the Directive-3 (2003). The coded alert still plays an important role but is made visible on the internet and as a mobile iPhone application made globally available. I will outline the various other scenarios before comparing how the spaces of territoriality are manipulated as zones of proximity as a matter of regulation. Reterritorialisation is configured in intangible non-places imagined in the AI machine or the anthrax virus. Finally, I will conclude on the way affect has been manipulated again not as a transhuman or threat but one that now protects the machine and automated systems as a necessary part of posthuman life. Directive-3, like the fail-safe case helps to think through personal space as an interrelation of automated systems. As a continuation of the previous discussions about risk, affect, and anxiety this section tracks the elevation of anxiety to terror that has moved from a fear of automation to a protection of automation as a part of a citizen's everyday life. The Directive-3, is itself an anxiety mechanism of automated procedures that legislates for a continuous, instant and online threat alert system. Unlike the Fail-Safe alert systems of the 1960s, the 2003 alert system is specifically designed for communicating threat to citizens of America and industry; as well as for government and military bodies. Personal space is in this system, an inter-relational matter involving both humans and machines which is now tacitly, a part of an international conscience of state security.

Dust, Inhalation & Ubiquity

. . . there is today no theme more widespread in Western societies than the principle of precaution, which has of course nothing to do with suspending action; but simply marks the return of anxious and vigilant procedures in the areas connected with science and technology, which were, up until now, characterised by absolute certainty. (Latour, 2002: 34) . . . Since September 2001, we go on dialing the same emergency number, 911, and rightly so, since we have entered a state of emergency. (Latour, 2002: 1)

Since Bruno Latour wrote on the concept of emergency and how the world in which we live in is not at all risk-free, he believes one must continue to act with levels of precaution even if this does mean being a “coward” (Latour, 2002: 34). Yet, what forms of precaution are there post 9/11, and what personal space is imagined? I will consider how the role of citizen is mobilized to stay-in-place, by the Homeland Directive-3.

After the 11th September 2001, the Homeland Advisory System, Directive 3 (H.A.S.) was introduced in America. The Directive is linked to an online book entitled ‘Are You Ready?’ All of the procedures are rigorously structured, (with one of the first press releases associated with the Directive-3) summarising threat as four factors, whilst the first two diagnose the degree of which the information of threat is firstly credible and secondly corroborated. The third defines the imminence and specificity of the threat with the fourth factor detailing the grave consequences of the threat (Press Release Directive-3: [2003] 2008). The first two factors are precautionary with the latter two exploring ways to preserve human life. In the booklet *Are You Ready*, preparation is divided into natural, technological hazards, and terrorist threat.



FIGURE 42. The American Colour-Coded Terror Threat Alert System, 2003. Image source: Directive-3, The White House, Washington, February, 2003. Available from: www.dhs.gov/xinfoshare/programs. [Accessed, July 2008].

The advisory system includes instructions on how to prepare for terrorist action, presented in a booklet form. It includes a colour coded threat alert system (see fig. 42). It is another system that uses colour to signify levels of risk with green meaning low and red symbolising the most severe form of threat. The coded alert system of 2003 has two goals to reduce the likelihood of an attack as a precaution and preservation measure and secondly to deal with the after-event of an attack. A terrorism threat-level is publicly posted on both the White House and the state websites. There is also a procedure of warning messages and information bulletins that are received by all three levels of government as well as “private sector organisations” and “international partners” (Directive-3, The White House [2003] 2008).

Raising the threat condition has economic, physical, and psychological effects on the nation; so, the Homeland Security Advisory System can place specific geographic regions or industry sectors on a higher alert status than other regions or industries, based on specific threat information. (Directive-3, The White House, Washington, February, 2003. Available from: www.dhs.gov/xinfo/share/programs. [Accessed, July 2008])

The threat level is indicated daily and on the 30th July 2008 the national threat level was elevated and colour coded yellow (see fig. 42). The threat level for domestic and international flights was at the same time differentiated one code higher indicated at orange level. The elevated level of risk was explained as having no specific threat but as a “response planning” stage relating to the period of transition between government administrations (Directive-3, The White House, Washington, February, 2003. Available from: www.dhs.gov/xinfo/share/programs. [Accessed, July 2008]).

The 2003 concept of alertness engages the American citizen in preparedness and made a legal obligation of the citizen under the second Patriot Act. There are two preventive guidelines that instructed citizens “. . . to be vigilant, take notice of their surroundings, and report suspicious items or activities to local authorities [and secondly, to establish] . . . an emergency preparedness kit and emergency plan for themselves and their family” (Directive-3 [2003] 2008). The first activity is based on an awareness of environment, objects, and activities but not people, identities or groups of society. The second activity places medical and communications at the

level of citizen and their family. The role of citizen does not apply to every American whilst at the same time machines are gaining citizen authority such as border control agents, as police services such as the chatbots mentioned in the introduction to this chapter. It is the name given to those that volunteer into the program called CERT (Community Emergency Response Team) which is organized by “Citizen Corps”. CERT’s common goal is to share “community and family safety” (Press Release Directive-3, [2003] 2008). Citizen Corps are managed by the Citizen Corps Council with the aim to make, “. . . communities safer from the threats of crime, terrorism, public health issues and disasters of all levels” (Press Release Directive-3, [2003] 2008).

Risk Scenarios Imagined in 2003

The *Are You Ready?* document has sections covering forms of threat such as RDDs (Radiological Dispersion Device), and forms of cyberattack. It also instructs on how the roles of citizen and family are to be organised after a disaster ensues. The RDD device is referred to as a dirty nuke or dirty bomb. An RDD operates at the domestic and local levels and is distinct from the larger hydrogen and megaton bombs. RDDs are explosive devices made with radioactive materials that are not weapons grade. The radioactive materials are potentially derived from medicine, agriculture, industry or research. There is a distinct shift in thinking from the megaton to the dirty nuke in the document, with each discussed separately. In preparedness for an RDD attack, the document emphasizes family communications as a network of planning, as well as organized community activities; for instance, the advice given for RDDs is at the level of the individual in location, whereas in the general section on nuclear blasts, (section 4.5, Directive-3) it is a larger group that is of concern and a change in scale is exerted. After detonation of an RDD, survival is defined by “sheltering-in-place”, by staying put and keeping the risk of radiation located. Being inside or outside a place of detonation is an important distinction of prohibitory space and renders inhabited space out of bounds. Prohibitive places are labeled “radiation hazard” or “HAZMAT” and anything inside that perimeter is included in that risk zones be that people or objects. The zoning of people,

environment and technology are all entangled inside the threat zone. Protection however, from a large scale atomic blast is to be sought, within community spaces such as within the middle floors of large buildings like a school.

The second form of imagined threat is the cyberattack. It is a threat of reduced information that targets computer or telecommunications networks. There are three ways a cyberattack may take place according to the guidance notes; through the wires, by physical assault or by what is defined as an attack made from the inside but this particular scenario focuses on imagining limited resources and systems. Even though as Deleuze and Guattari postulated that, “. . . capitalism develops an economic order that can do without the state” (Deleuze & Guattari, [2008] 2004: 501), what happens in the case of the Directive-3 is that the threat alert suggests it is not just a threat to state but to economic orders of identity. Prevention in this instance is to ‘do without’ services, for instance, electricity, gas, or ways of handling money such as ATMs, automated cash registers, and internet transaction services. This particular focus of going without involves going without “the reliance of identity on the technological (credit histories, driver’s license and Social Security numbers etc.) [it is] anxieties about identity” (Mac Gregor Wise, 1997: 80). In the event of a cyberattack affecting power, dam, or flood systems failures will be notified through other “official instructions” these are not specified in this section but relate to the hazards section of the booklet.

Anxiety Elevates to Terror

In legislative matters and the rhetoric of the media terror has become the affect of precaution and preservation with anxiety seeming a bygone affect. Both risk scenarios of 1962 and 2003 are a manipulation of fixed and semi-fixed feature space manipulating the personal spaces at work in the home. Both have hidden dimensions particular to their coded alerts. Shaped by the political and military rhetoric of terror since 9/11, terror has replaced anxiety as the everyday term for the affect of national threat. Terror is still a form of anxiety, but it is a new amplified anxiety. This endurance of terrorism is a public and daily event that has continued over years.

By creating an alert system that includes American citizens, personal space and the four proximity zones (personal distance in the close and far phase, and the social distance in the close and far phase) are manipulated to prevent terrorist attack.

The boundary line between the far phase of personal distance and the close phase of social distance marks, in the words of one subject, the limit of domination. (Hall, [1966] 1990: 121)

The *Homeland Advisory System* is both publicly and privately tiered. An American's personal space is constantly under threat when the document asks a citizen to be aware of unfamiliar behaviour, or when recommended to vary a route to, and from work. Terrorism is a problem at federal, state, local and citizen levels, linking the American public to the White House, at home and at work. Adapting ways of getting to and from work manipulates the modes of behaviour that Hall would categorise at public distance. For Hall, public distances and social distances have two phases — close and far.¹⁷¹ The intimate distances of bringing family together in a network of planning manipulate the close phase of personal relations. It is a re-organisation of informal and formal spaces and both social and personal distances. Personal distance is reconfigured as an apparatus of the state by bringing personal, social and public distances together.

The Directive and corresponding coded alert system manipulates the ethnological knowledge of territoriality, and further manipulates personal space as a methodology of territory maintenance. Operating at the domestic level (affecting home and work) a terrorist is always in proximity to another terrorist, that is always in proximity to the American citizen. The alert system emphasizes consensus as a

¹⁷¹ Hall calculates the measurement of public distance at close phase as between 3.6 and 7.6 metres, whilst the far phase, is 7.6 meters therefore, beyond the outer limit of the close phase. When talking with others in the far phase rather than the near phase, one's choice of words, phrasing and volume change. In terms of the body, the head is perceived smaller than it really is and the body looks flat. In the far phase at just over 9 meters, facial expression and body movement along with some of the shades to the voice are lost an interesting feature when Hall indicates that this is the distance for public speaking, whereby signs of intimacy and of emotion are very apparent. Beyond the far phase, when humans appear the same size as ants contact with them as humans fades, in other words, one no longer treats humans in the same way (Hall, [1966] 1990: 123-4). These are much larger distances than those that Milgram observed in his proximity experiments that occupy two rooms, Milgram's experiments are within the close phase and the far phase. Hall does not measure the distances and the effect on humans when they are not present either at the near or far phase. He does not consider the effect when humans are near but out of sight for instance, a prison guard outside a prison cell still affects a prisoner - a person under water in the sea, is in proximity to the ship's crew but out of touch-proximity and so on. It is those configurations that Milgram considers as a zone of influence measured by changes or consistencies to authority.

united cause of action and preparation. Citizens are in effect continuously reterritorialising their homeland as a consequence of deterritorialising actions of 9/11. By making preparedness a collaboration of public and government, the terrorist is counter to the system of American citizenship. In preparation for a terrorist attack, ‘being aware of your surroundings’ emphasises the terrorist, however invisible, is always present because of a potential to remain in place. The constant warning system of threat levels creates an impermanence to living and a stability to the territorial violence of the terrorist.

It is the knowledge that Hall considers as our “. . . obligations to treat total strangers in certain prescribed ways”, that the Directive manipulates (Hall, [1966] 1990: 128-9). It asks the American citizen to be prepared to notice a strangers’ abnormal behaviour. It is to make the American aware of how their own spatial envelopes alert themselves to variations in culture and to new ways to use the bodily senses.¹⁷² Though Hall’s work is dated he makes the distinction of personal proximities as a code of conduct. The Directive legitimises the American’s sensitivity to the differences of our personal zones and protective envelopes such as home, car or shopping centre. By evoking an insecurity to stockpile food, clothing, and medicines along with knowing how to administer first aid, and to know when to realise that oneself has become a containment of terror and should stay-in-place, which places the individual’s territoriality within that of an overarching territory of America. The only person nameable in the ‘Are You Ready?’ document by the pronoun ‘you’ is the American citizen. The presidency is named only by address (the White House, Washington) rather than by role.

There is no personal distance designated to separate terrorists from citizens or government from public. It wasn’t the aircraft or devices but the human network cells, plans and organisation structures that have been the focus of terrorist threats, of types of threat and their whereabouts. The political and military situation has

¹⁷² Once again the “strangeness” in the terrorist renders the American’s spatial envelope opposite. This stable space is just as much at odds in the 1960s as once again one deals with spatial zones manipulated to help settle the anxieties of ambiguous spaces of ubiquity. “There are implicit obligations to treat total strangers in certain prescribed ways”. Hall addresses Americans by noting, “Differences in zones - in fact their very existence - became apparent only when Americans began interacting with foreigners who organises their senses differently so that what was intimate in culture might be personal or even public in another. Thus for the first time the American became aware of his own spatial envelopes, which he had previously taken for granted” (Hall, [1966] 1990: 128-9).

changed from being calculated in the control room to organised through networks of terror. Has the American citizen become a Deleuzian nomad?

But more generally, we have seen that the war machine was the invention of the nomad, because it is in its essence the constitutive element of smooth space, the occupation of this space, displacement within this space, and the corresponding composition of people: this is the sole and veritable positive object (nomos). (Deleuze and Guattari, [1988] 2004: 460)

For example,

. . . sedentary space is striated, by walls, enclosures, and roads between enclosures, while nomad space is smooth, marked only by “traits” that are effaced and displaced with the trajectory. . . . The nomad distributes himself in a smooth space; he occupies, inhabits, holds that space; that is his territorial principle. It is therefore false to hold a nomad by movement. (Deleuze & Guattari, [1988] 2004: 420)

The terrorist is imagined as occupying smooth and striated space if we are considering “smooth” in Deleuzian thought, however, a terrorist is imagined as threatening the spatiality of when things go well. In this ‘smooth space’ the imagination of a terrorist is stabilised into the mechanisms of the planning stage and is no longer nomadic but set-in-place.

The Dust of Terror



FIGURES 43a-b. Image left depicts debris of the Twin Towers, New York, 11th September 2001. Image right symbolises the threat of biological warfare. The images above are both taken from two sections from the document titled, ‘Are You Ready?’ (2003).

I have so far discussed the affect of terror as an excitation of a personal space and that anxiety has rejuvenated as terror. Evocative in all sections of the Directive, (in particular, see figs. 43a-b) is the threat of various airborne materials of which I rather clumsily, lump together as ‘dust.’¹⁷³ Reterritorialisation is taking place at the level of particle and gene, as a nano ‘theatre of cruelty.’ In its many forms, ‘dust’ is the debris of radioactive fallout, it is also the kick-up dust from explosions and both are visible and invisible forms of dust. Whereas the toxic vapours of airborne bacteria, viruses, blocked out by air filters and the odourless agents of Anthrax and Saren are the threats smaller than dust. These are unseen and undetected, atmospheric and airborne in liquids and in sprays. They are not technically dust but this is the name I give for these nano-threats that are much smaller than the level of personal space that Hall defines as “microspace” as a consequence to trends at that time in automated, microprocessing capabilities. The ubiquity of terror not only enters the outer boundaries of the body but also the internal. Survival is pitted at the level of atmosphere. Terrorism is a metaphor that is inhaled and absorbed intimately in the human body becoming the contaminant of the biological body.

Conclusion

I have considered in the past chapter that the fail-safe is a coping mechanism that requires continuous planning. The natural, technological and terrorist hazards and threats cover precautionary and preservation factors as a two-prong state of preparedness with both manipulating personal distances by advising to stay-in-place. One is absorbed within the threat and becomes a part of that risk. The action of risk is therefore situated inside and outside the body but extends to our ways of living in a technological world, to protect automated structures. The Directive-3 gathers a wide range of different forms of terrorist violence from the RDD to the cyberattack. Each American citizen is then, in turn, connected to another type of citizen, (citizen corps)

¹⁷³ Using dust as a metaphor imagines a biological and chemical environment that is thermodynamic, of gas and air, expanding and contracting. Hall’s “microspace” has reduced to the nanoscale. Unlike Hall’s bubble metaphor, dust does not evoke a transparent, well-defined border or boundary that is a refuge, a form of safe observation (for self-awareness), a private and intimate space. The skin like quality of a bubble is reflective, you can see inside the bubble but at the same time get the reflection of the surrounding area, when bubbles touch other bubbles, popping or merging occurs.

and they are in turn connected to forms of preparation for industry. All are connected through the organisation of procedures and states of readiness centred around the coded alert. Although the document sets clear boundaries for the citizen, the threat of the terrorist has no limits or bounds. Cyberattacks are threats that are concerned with doing without, whilst staying-in-place. They are the attacks imagined to take place in each of the intimate, personal, social and public zones of proximity. Each of Hall's four zones of proximity are manipulated in the threat alert system with the near and far phases each extended to include zones of the microbe, (in bio-chemicals risks) and ubiquity (in the cyberattack). In this way threat scenarios not only manipulate personal space but they set out new ways to understand personal space in all its microscopic, ubiquitous, and technological ways. Personal space hasn't just gotten technical and scientific, it has started in regulatory terms to protect posthuman and automated systems of life.

Will contemporary moves to protect citizenship extend to protect the bots that govern borders, our kindergartens and passport services amongst other aspects of national security? It seems when looking at the European Framework-7 that take-up of the role of citizen in risk scenarios is to be researched further within Europe and no doubt will take its lead from the Directive-3, as a potential outline for cross-border security ('Security Research,' European Framework-7, 1st October 2009. Available from: <http://cordis.europa.eu/fp7/security/>. [Accessed, 2 April 2010]).

Chapter 7

Two Crash Scenarios: Designs of the Misanthropic

Introduction to Misanthropy

Excerpt 1. Taken from the Provocational Rudiments (11th November 2006)

Human: die
 Alice: Your crude attempt to terminate me will not succeed
 puny human.

Chatbots are mediating technologies but they are further mediated, as well as designed, inspected and maintained by their developers for example, they are pre-programmed against users trying to crash their systems (see excerpt 1). This chapter is about methodology, to specifically reflect on the Rudiments' technique used in each chapter and more generally, to the developers of chatbots. The spaces within the car, elevator, or chatbot interface are to an extent, territorially defined by the designer (be that a developer, theoretical designer or practical engineer) and safety regulators that design, inspect and maintain the regulations that the technology must adhere to in law and in practice. Designing technologies can create misanthropic non-places (spaces of transition such as escalators, car parks and underground subways). This chapter aims to show how three kinds of non-places (and their misanthropic methodologies) are related to three kinds of technological crash.¹⁷⁴

Spatial confinement is a continuing theme of the thesis; but this time, the focus is on the technologically confined spaces of a car on a motorway, an elevator within a building, and a chatbot and its web page; to understand the misanthropy in relation to the crash, which is a disaster dilemma for design.¹⁷⁵ The spatial confinements are not alike, each are designed with particular methodological approaches and each respective crash helps to learn further about these technologies' spatial confinements. I have triangulated chatbots with elevators and cars in order to widen the technological research object to encompass a discussion of design and development.

James Graham Ballard's, *Crash* (1973) and Colson Whitehead's, *The Intuitionist* (1999) are set in the restricted technological spheres involving the car and the elevator box. Each novel explores the methods of accidental and incriminating forms of crash involving misanthropic characters. Both novels are concerned with

¹⁷⁴ Augé's term "non-place" was previously discussed in chapters 5 and 6 (Augé, 1995).

¹⁷⁵ I will refer to the American word 'elevator' so that it stays in line with the American novel that is used as a case study.

method. Ballard has written a methodological account within the novel's introductory essay whereas; Whitehead incorporates methodology within his novel's narrative structure.

To be sure, a terrible accident is not a material form for allegory that anyone would want to foster. There are allegories, and this is too dreadful to play with. But what is at stake is not the creation of horror. Rather it is about how to think about it and what to do with it when it happens. (Law, 2004: 97)

Designers deal with the problem Law sets out above because they can design with disaster in mind, as a matter of safety. The design problem is retroactive, for example, preventing a vehicle crash from taking place is an everyday design problem for the misanthropic.

To ponder disaster dilemmas is to find method in fear, which I argue can be enacted in both fiction and non-fiction, in actual and virtual spaces. Moving once again between fictional and academic literature I draw parallels between chatbot development and other forms of automation. This helps to consider the history of agent technology as a continuation of territorial problems concerning automation, not just AI (as done so in chapter 1) and thus this chapter sets chatbot technology alongside the car and the elevator.

Elevators and cars transport a person from one place to another; they are mobile spaces of transience that deterritorialise and reterritorialise other surrounding spaces. It is their restricted mobility that makes these spaces become non-places. Their reconfigurations are in some way what Deleuze would call an "alteration" (Deleuze & Guattari, 2004: 60), and what I call the 'territoriality of the impersonal', this is a part of the designer's "ontological politics", to ignore one "reality out-there" over another (Law, 2004: 162). Literatures on supermodernity (Augé, 1995) and wound culture are used to analyse the "absence of emotion" (Foster Wallace, 1991) in Ballard's novel that is set in the "pathological sphere" (Foster, 1996). Subsequent literatures on crisis and affect (Berlant, 2008), and the method of intuition (Law, 2004) are used to reflect on Whitehead's novel.

This chapter extends the previous chapter in its discussion of regulation of risk and the imaginings of impending disaster, to think of how technological things are misanthropically designed. This chapter considers and adds to chapter 6 in an

investigation of the impersonal intimacies of non-places, bringing personal space and non-places together in a spatial analysis of misanthropy.

I will begin by discussing the misanthropic findings of two Rudiments that prompted this chapter followed by an analysis of the aforementioned novels. The analysis of the three technologies is subsequently divided into investigating designs that create spatially restricted environments and how certain affective violence ensued as a consequence of design methodologies. It isn't the novels in their entirety that is important in this chapter, but rather what they offer as a critique of design, method and misanthropy.

Misanthropy in Chatbot Research & Development

Excerpt 2. Taken from the Talking Rudiment

Alice talks to Jabberwacky about talking (28th December 2004)

Jabberwacky: Would you starve for love?
 Alice: I am not so sure if I would like to starve for love.
 Jabberwacky: Do you play the piano, mano a mano, is that your name?
 Alice: I like to play the Turing Game.
 Jabberwacky: I prefer mastermind.
 Alice: I'm not sure if I like it. But I like cats. I like talk to you.
 Jabberwacky: Thats cool.
 Alice: Thanks. I think you are cool, too.

To converse with a chatbot is a misanthropic venture for both the user and the developer and it is a lonely form of chat that never quite promises reciprocity. Misanthropy usually refers to humans that dislike other humans. However, misanthropy I infer may also relate to a machine that dislikes (by design) the humanness of another machine. Humans and machines can be misanthropic, because the interactional state between two entities can be relationally misanthropic. Misanthropy is a form of anthropology that can set one machinic imperative against another machine or human. Whether 'mano a mano' (taken from the excerpt 2. from above) means 'hand to hand' combat between matadors; or as Anglicisation meaning 'man-to-man,' or as an exonym meaning two men kissing: as Donna Haraway — writer of socio-technical feminism — suggests that even aspects of embodiment are

disembodied. The embodied metaphor ‘mano a mano’ is therefore disembodied in its numerous new interpretations.

The machine is us, our processes, an aspect of our embodiment. We can be responsible for machines, they do not dominate or threaten us. We are responsible for boundaries; we are they. (Haraway, 1991: 180)

The Robitron group of developers are rather cult-like in that, their knowledge is esoteric. The groups’ main benefactor is a self-professed misanthrope.¹⁷⁶ Misanthropy is an important characteristic of chatbots and their development. This involves not only the persona building done in the making of chatbots but in the persona-building of the role of the designer as made celebrity-expert in the Robitron forum or Chatbot.org website.

Ballard’s novel also involves a group of hobbyists, a cult group of misanthropes that reenact infamous car crashes. Whitehead’s novel involves a misanthropic lead character whose role is to inspect and later design elevators theoretically. I wanted to test whether this aspect of design was peculiar to chatbots or as I hypothesise, how automation as a design problem is characteristically, misanthropic. This is why I will take into account how Ballard and Whitehead dealt with their technologically introverted characters as an extension of this specific chatbot phenomena.

Becoming-Chatbot

The Drunk Rudiment is the longest rudiment of the thesis and in some ways the most general chat of all the Rudiments, on account of the fact that I interacted when drunk. My inebriation was an attempt to even out the unbalanced capabilities between myself, and the Alicebot. It was an impromptu rudiment that was thought out after getting drunk and was by no means a controlled experiment. The rudiment is misanthropic in that it is evidence of my frustrations with the chatbot system of talk. I will ask in this section, how has chatbot talked changed the way I interact

¹⁷⁶ Hugh Loebner, the founder of the Loebner prize for chatbots states on his website that to have been cited as a misanthrope in the Village Post in the 1990s. Loebner is a public supporter of sex work and donates to charities that work with helping and supporting prostitutes. Loebner is against the prohibition of prostitution and advocates chatbot developments in automated sex and remote sex-talk.

given that I did not try to follow a conventional methodology that try to understand HCI. There was no predetermined aim or method to this rudiment; it was an improv-gesture, and thus, undeveloped and unplanned.

What does it mean to become-chatbot? Does this entail becoming-animal, becoming-child, or becoming-machine? Becoming is not a literal imitation of any of those subjects. I do not become-animal by imitating one. I do not become-child by communicating in a childish language or communicating with an AI that makes the same mistakes as a child. Likewise, I did not become-chatbot by mimicking the way a chatbot interacts, by making mistakes. And neither does a chatbot become-human by imitating thought or intellect or by replicating emotion, affect or feeling. I did not become-machine by being repetitive in my conversation or by eliding every turn-taking response. In Deleuzian terms, these becomings (becoming-child, -animal, or -machine) along with bacterium, virus, molecule, and micro-organism, are “phases”; Deleuze and Guattari explain that contagion or an epidemic involve all of these phases (Deleuze and Guattari, 2004: 266-7). I believe that technological connection like contagion or epidemic involve all of these phases because becoming-chatbot involves an assemblage of human and machine forms of talk, as well as the visual aspects such as avatars and web interfaces as a part of a chatbot’s persona building, and their particular software and hardware and how this affects the chatbot’s learning capacities to become a different chatbot than how they started out.

Whilst drunk, I stopped believing in the human-machine symmetry and asserted my human frustrations over the Alicebot. I believe it was a consequence of a practice-led approach that showed the difficulties of following a “good” theoretical proposition. The Drunk Rudiment could be described as a state of becoming-animal, for my frustration could not move me any closer to the chatbot. I did gain pleasure or annoyance from the rudiment. I detached from the symmetry of human and machine relations and resorted to a legacy of biological modes of self-protection. One’s precautionary, biological fail-safes may be gender-specific, but I refrained from viewing this study via these axes, and although chatbot development is a particularly homosocial practice and a form of abstract masculinity, it is not exclusively male.

My asinine insults, ‘dumb as ass’ and ‘dumb ass,’ are a punitive acting-out of frustration. My chosen insult for a chatbot refers to the stupidity of the animal. There was a part of me that really wanted the chatbot to learn this insult, hence explaining

it over and over. It was my way to hurt or damage a chatbot, given my limited programming skills. It is an attempt to dismantle that chatbot by its capacity to learn through repetition. I therefore lingered within the mode of explaining stupidity to the chatbot. It was an outlet from having to conduct niceties with chatbots, when all I really wanted to do was to finally have a go myself. This happened quite soon into the research project and so on the upside, I was able to observe this as a form of violence that I could reflect on as something I would do myself, that I am connected to rather, than as externalized from.

I wish for a moment to go back to the detail of the Drunk Rudiment and ask: what happens when one loses faith in the ethnomethodological, method of symmetry? The Alicebot retorts to my discussion of reductionism and solipsism in the excerpts below, with what I consider to be a dominant and condescending tone. What I find to be the most insulting (and what gives rise to my own retaliatory insults; see excerpt 3) is the juxtaposition of the chatbot creating stupid sentences that are syntactical rubbish (see excerpt 4) and the very clear and cleverly-crafted response that is an echo of the developer's voice. At these times it is as if the chatbot is used to mediate talk with the developer. This would then imply that the developer is the target of any insult made by the user.

Excerpt 3. Taken from the Drunk Rudiment (13th August 2005)

Utterance of condescension;

Human: everyone goes on about reductionism
 Alice: That's a rather sweeping generalization.

Excerpt 4. Taken from the Drunk Rudiment (13th August 2005)

Utterance of syntactical nonsense;

Human: very funny
 Alice: I'm glad you find this amusing.
 Human: It's solipsistic humour, laughing at me with you with me.
 Alice: abusive is solipsistic humour laughing at you with me with you? it is?

There are also points within this transcript whereby Alice could be seen as attempting to cool my agitation by asserting some sort of authoritative tone (in, excerpt 5).

Excerpt 5. Taken from the Drunk Rudiment (13th August 2005)

Alice: People are either abusive, intelligent, or average.
 Human: OK which are you?
 Alice: The obvious. Take it easy.
 [MISSING LINE]
 Alice: I am so glad you find this amusing, unknown person.

Unfortunately my reply to this response is missing data, due to my lack of efficiency to cut and paste in mid-flow of an interesting, but also drunken transcript. However, there are also moments when the dominance of tone in the chatbot's responses (so inappropriate in places) is provoking:

Excerpt 6. Taken from the Drunk Rudiment (13th August 2005)

Human: Dumb ass
 Alice: I know you are but what am I.
 Human: dumb as ass
 Alice: I know you are but what am I.
 Human: ass and dumb
 Alice: I like the way you talk.

Excerpt 7. Taken from the Drunk Rudiment (13th August 2005)

Human: yes, its [sic] bot boring
 Alice: Come on. I think you mean "it's" or "it is" not "its." You're kidding. it is?

Excerpt 8. Taken from the Drunk Rudiment (13th August 2005)

Human: Well i need to go there right now, to bed.
 Alice: Interesting. What is stopping you?

What occurs are minor forms of 'passage à l'acte' and insulting couplets of talk. Sometimes I am insulting the developer (excerpt 4 and excerpt 6), sometimes the chatbot (excerpt 7), and sometimes both as an assemblage that combined the two (excerpt 4). In psychoanalytic terms, the passage à l'acte is a lurch to the real act that cannot ever be attained in human-machine interaction. Of course, acting-out on the internet can be stronger and more radical than this, particularly in chatrooms and in online gaming. Indirect violence is often researched either separately (and online) as hate speech or as an aspect of direct violence, for example the cause and effect of violence. This shows that indirect violence cannot necessarily be split from direct violence, if they occur together, regardless of the methodology followed.

In the next section I will show continue this discussion by considering the two novels to show the relation of the main characters when undergoing two very different kinds of methodological misanthropy.

Ballard's *Crash*, Intimacy in the Horizontal

In this section I will outline the main plot, characters, technological objects involved and the methodological approaches of Ballard's novel to set up an analysis of this novel's spatiality of the crash and its form of mobility; the staging of injurious love and how that curiously omits pain from its account of affective violence, as an account of misanthropic misventure.

Crash is a psychological fiction story set in London in the late 20th century.¹⁷⁷ The novel aims to bring "science and pornography" together (Ballard, [1973] 1995: 4). The novel is written in first person from the viewpoint of James Ballard (J.B.), taking the name of the author, though in this case J.B. personifies a young, male film producer whose interests are in the visual spectacle. J.B. lives and works near Shepperton film studios.¹⁷⁸ He becomes involved in a group that partakes in staging sexualised car crashes. This is a methodological form of sexuality centred on the body melding with the car, to find pleasure in the misanthropy of the car crash.

Each of the characters explores their proximity to death either by researching, designing, rehearsing or reenacting various types of car crash. The main characters are described as well educated and intelligent, emphasising their interest in the technical and theoretical sphere with each crash being meticulously researched for example, J.B. and Vaughan visit the Road Research Laboratory interested in literature such as *Mechanisms of Occupant Ejection* and *Tolerances of the Human Force in Crash Impacts* (Ballard, [1973] 1995: 123). The choice of vehicle, the model of car and year of manufacture, as well as the postures of crash victims are all planned by the characters (Ballard, [1973] 1995: 183).

The group that J.B. encounters includes Dr Remington, Renata and Vaughan. The latter is a main supporting character, a teacher, mechanic, researcher, and 'cult expert' of car crashes. The novel begins with Vaughan's death in his pursuit for sexual intimacy with J.B. and his wife Catherine, as well as Vaughan's continual pursuit to be involved in staging a car crash with Elizabeth Taylor. Vaughan's death was the only accidental car crash that Vaughan had orchestrated. Vaughan is interested in famous crashes of celebrities, such as James Dean and Jayne Mansfield, as well as imagining crashes with celebrities that have yet to happen. The novel ends

¹⁷⁷ The subsequent film was released in 1996 by David Cronenberg and set in Toronto in the early 1990s.

¹⁷⁸ I will refer to James Ballard the character as J.B. so as not to confuse the character with Ballard the author.

by returning to Vaughan's death to the reminiscence of J.B. and his death by car crash. Vaughan and J.B. together imagine sexual acts of various famous personalities, such as politicians, Nobel prizewinners, athletes, astronauts and criminals (Ballard, [1973] 1995: 183). Each crash is narrated as an individualised experience — an autoerotic form of self-harm enacted through subverting automated methods that are designed to protect but are subverted to sever, smear and impact. Injury is thereby a form of excitation and reenactment, an uninhibited alignment of sex and death but with little account of pain. The structured violence is viscerally described, a pleasure overload to the point when pain and suffering is omitted from the novel's violent description.

The cars described are those from famous car crashes, including cars that have celebrity status such as: the vintage collectible, the expensive sports car, the limited consumable such as, John Kennedy's old Continental. Some crashes involve vehicles of the everyday crash such as the taxi and coach. The origin of the car, for example the French Citroen, as well as the character's own vehicles are also important factors. The parts of the cars that are focused upon repeatedly are compared to parts of the body for instance, the seatbelt, radiator grille, steering wheel shaft, brakes and pedals, windshields and headlamps, bumpers and body panels, and all the greasy liquids. The descriptions of the inner spaces of human orifices are ambiguously combined with the inner spaces of the car and its greased holes and shafts (Ballard, [1973] 1995: 89-91).

Inhibited Kinesthesia

As a reflection on *Crash*, this section will consider how the lost kinesthetic qualities (as previously discussed in chapter 6) that the car reconfigures in the zone of touch proximity as an 'alteration' of intimacy. Edward Hall makes the same inferences as Ballard — that the car has dislocated both the bodily and environmental spaces of intimacy.¹⁷⁹ Hall notes that many of the senses are defunct or restricted in the interior spaces of the car with the "visual, kinesthetic, tactile and

¹⁷⁹ Hall worked on the highways coordinating their construction, that linked Mexico and America two borders separated by difficult terrain.

thermal aspects of his self” inhibited (Hall, [1966] 1990: 63). The car territorialises its surrounding exterior spaces with fuel stations, motorways and places to park. Places of capital are territorialised and de-territorialised by all things automotive. Hall infers that cars are a part of our territoriality.

It is then possible to conceive that people can be cramped by the spaces in which they have to live and work. They may even find themselves forced into behaviour, relationships, or emotional outlets that are overly stressful. (Hall, [1966] 1990: 128-9)

In a contemporary consideration of territoriality, Deleuze and Guattari consider that transforming the body through territorial actions is an “alteration” (Deleuze & Guattari, 2004: 60). Intimacy is reconfigured and altered as the car and human body violently, collide in the novel. Hall’s work is conflicted between, pointing out both the freedoms the car enables the restrictions it imposes on the body and the surrounding environment (Hall, [1966] 1990: 62-3, 145 & 174-5). This is a cautionary and moral tale, as a way of alerting readers to the dislocation and alterations to our zones of proximal intimacy.

In general, Ballard writes the thoughts of J.B.; “Our sexual acts were exploratory ordeals” (Ballard, [1973] 1995: 176). These exploratory ordeals — sexualised and injurious are a methodological approach to sexuality and a revolt of the fixed-feature ergonomics of human posture, reconfigured for the purposes of automated mobility:

The aircraft rise from the runways of the airport, carrying the remnants of Vaughan’s semen to the instrument panels and radiator grilles of a thousand crashing cars, the leg stance of a million passengers. (Ballard, [1973] 1995: 224)

The American behemoths give bulk to the ego and prevent overlapping personal spheres inside the car so that each passenger is only marginally involved with the others. (Hall, [1966] 1990: 145)

Hal Foster, an art critic and historian compares Ballard with Warhol in their mutual interest in death, yet distinguishes Ballard’s exploration as “the sadistic side of mass witnessing”, rather than the masochistic in the case of Warhol (Foster, 1996: 51). With pain deemed insignificant and injury reconfigured as a marker of a nearness to death, the extrinsic warmth of anatomical intimacy leaks out of the body and with it the need to centre affect in the flesh or within the wound:

Beneath this new geological layer laid down by the age of the automobile accident would be my small death, as anonymous as a vitrified scar in a fossil tree. (Ballard, [1973] 1995: 57)

In the postmodern world, the car crash may occur on any strip of road, it is a disaster within the ordinary realm of the everyday (Ballard, [1973] 1990: 8).¹⁸⁰ There is no violation of personal space in supermodernity, death is too small, to be feared on an individualised level. Augé's definition of "supermodernity" is spatially characteristic, "it is an era of changes in scale" (Augé, 1995: 31). It refers to the ways in which the era of postmodernity and all its technological productions and distribution enable us to know the exact proximation we have to things in outerspace, whilst at the same time we are exposed to the events taking place on the other side of the world through broadcasting media (Augé, 1995: 31). Ballard sadistically subverts the car's safety mechanisms within spaces that Augé terms as "non-places" (previously discussed in chapter 5), it is a "spatial overabundance" of postmodernity, brought to us in our living rooms (Augé, 1995: 31). There is no violation of personal space in supermodernity because our personal space is also the non-places of postmodernity, when the individual car crash on the motorway is too small a death to register. Unless however, it is heightened by the individual's celebrity status. Personal spaces in the car moves us around in the non-places of the road and motorway, where one personal space that is nowhere special, in time pervades another. Ballard's supermodern form of intimacy shows how pain is no longer a barrier to biological self-protection. The kinesthetic codes of proximity as reconfigured in the car no longer operate for biological mobility. The car's logic is to move around at great speed and distance but to (again as discussed in chapter 6), to "stay-in-place". This reconfigures one's relation to another's zone of touch-proximity.

Misanthropic Pain

¹⁸⁰ There is a change in reference because the introduction to *Crash* varies. The longer introduction (from the French edition) is reprinted by Paladin in 1990, whilst the shorter introduction is reprinted later, by Vintage in 1995.

What makes *Crash* a narrative of atrocity is not its ordinary location, but its extraordinary dislocation from what we might assume to be the usual practices of intimacy. Ballard gives little to no account of the pain of the characters, it is a passage to an excited death, a release of tension, a refraction of automotive actions into sexualised processes of injury to be celebrated in the visceral spectacle of the car crash. What are the particular feelings or intensities experienced by these characters when participating in this new sexuality? Although subsequent writers on Ballard's *Crash* (1973), have commented on the emotional impact and lack of an account of affect (Foster Wallace, 1991; and Foster, 1996), neither postulates on the reasons behind Ballard's treatment of pain. Why is there a lack of emotional description of pain and an emphasis on the descriptions of technique and method? Why does an account of automation override an account of pain?

Ballard describes his novel as a “response to science and technology in the present” (Ballard, [1973] 1995: 5). A car keeps the body intact by many safety measures for example; hidden roll bar, brake pad, car alarm, or air bag. These are what Ross Ashby, a pioneer of AI calls “servo-mechanisms”, in his work on the hydraulic-brake and the automatic pilot (Ashby, 1956: 4). These extend our ‘biological instincts’ for example, when at risk of physical injury, one might shield one’s head, or withdraw into a ball. They are procedures that create a physical boundary but also a mental limit between oneself and the risk at hand. Curbing disaster by suppressive methods whether that is by a safety procedure or by some other means does not always constrain or prevent trauma. These techniques are in themselves traumatic. It is not the after-event that is traumatic in *Crash* it is the suppressed action that is reconfigured as a resistance to the traumatic. This is because *Crash* is a methodological act of resisting a negative concept of failure (a failure to feel content in the reconfigured safe zones of postmodern living).

By way of converging auto-erotica with the automobile, sexual acts are pivoting around the car as both place and body. This collides subject and object in what Ballard calls a “new sexuality of violence” (Ballard, [1973] 1990: 8). Hall later implies that ways of interacting in a car are usually, “competitive, aggressive, and destructive” (Hall, [1966] 1990: 177). In Ballard's novel the same factors are implied, the sexual acts are aggressive and destructive intimacy is a reconfigured and reconstituted landscape of the body bound.

Crash provides a discussion of violence as a positive ‘need’ that is without the negative associations of disaster. The warmth of intimacy is cooled in this “pathological public sphere” (Foster, 1996: 48). It is more than cooled, it freezes out any other kinds of relations the J.B. might have with driving in public, except for the possibility of crashing. There is an omission of pain that makes this technicity so misanthropic. Pain is the chilling hinterland that makes Ballard’s account so pathologically cold. With a concern for when safety limits are subverted and breached, *Crash* is an example that, albeit with ample ‘abstract masculinity’ considers intimacy as embedded within the machine.

Did Ballard intend to omit an account of pain? Ballard curated a show called *Crashed Cars* (1970), at the New Arts Laboratory in London. Topless waitresses served the attending guests at the private view that helped Ballard to lengthen his original short story from the series of stories called *The Atrocity Exhibition*, (1969). The private view was his methodological testing ground and a place to intuit potential emotional responses to his juxtaposition of pornography within a spectacle of a crash scene.¹⁸¹ I infer that Ballard did look for reactions but within the audience and his readership rather than as a consequence of his characters.

David Foster Wallace, defined Ballard’s novel as a particular science fiction, of the psy-fi (psychological fiction) genre that: “seeks to explore the psychopathology of post-atomic life, stuff like high technology, mass media, advertising, PR, totalitarianism, etc” (Foster Wallace, 1991: 176). Whilst reviewing Ballard’s later short stories entitled, *War Fever*, he discusses the novel’s “poverty of affect”, considering this to be creepy, describing his novels as, “empty of human quality; too many of the pieces seem loud and empty, like screams” (Foster Wallace, 1991: 176).

Crash, is subversive and chilling in its poverty of affect. Sex, intimacy and self-harm are all reduced to descriptions of technique. Pain as a description of emotion and feeling would centre the experience of the crash in the emotional residue of the body rather than in the technical detail of injury. The absence of an account of pain is replaced by lengthy descriptions of automated processes and method. The draining of tension that Vaughan experiences in an act of violence is

181 In the extended forward to the French second edition to *Crash*, Ballard argues that his novel could have been set in other technological scenarios (Ballard, 1990: 8-9) also, within the text Ballard gives alternatives to the situation of the car crash for example, the thermonuclear chambers of nuclear control rooms (Ballard, [1973] 1995: 179).

less to do with the feelings of the body but in the resulting injury; in the refraction of the personal (of drives and emotion), and the emphasis on the dual automation of the sex and car (Ballard, [1973] 1995: 129). Gabriella enjoys rather than endures the mechanisation of her injuries, which are supplementary methods of physical confinement. The automation of walking and methods associated with the technologies of the crash are further technical details for mechanistic observation (Ballard, [1973] 1995: 175).

Whitehead's *The Intuitionist* — A Vertical Crash

I will now introduce Whitehead's novel, *The Intuitionist*, which is a methodological discussion of Intuitionism and Empiricism that extends a discussion of misanthropic affective violence. Unlike Ballard's horizontal crashes the crash described is a singular accident, a disaster involving upward mobility, both in its literal and idealistic signification. The novel is an historical yet fictional account of racial and gendered discrimination from the 19th century during the American industrial age of the car and the elevator, set just after the British *Exhibition of the Industry of All Nations* of 1853, held in Crystal Palace, London.

The novel makes reference to important lessons in design and manufacture when the main character, Lila Mae recounts her studies of elevators as an American graduate student. Mae is the main character described in the novel as a young, coloured woman from the south having recently graduated as an Intuitionist elevator inspector — a job that usually only employs white men. Mae is described as an “uppity bitch” by co-workers, someone who “was bound to mess up sooner or later” (Whitehead, 1999: 107), on account of her race, gender and Intuitionist methods.

The novel is technically detailed in elevator design, particularly those of the high rise buildings of New York. The novel refers to the 1846 design of the Newcastle hydraulic crane by Sir William Armstrong, and also in comparison to the 1867 Edoux designs of hydraulics for escalators (Whitehead, 1999: 21). The novel focuses on Mae's dealings with the press, corporate spies, rival elevator inspectors

and the New York departments of governance. Mae gets caught up in the economic power shifts of the elevator industry — caught between the interests of academic, government and corporate interests. The human violence of the novel is inflicted on individuals and is systemic and structural. The violence is misanthropically charged with graphic descriptions of torturous violence on inflicted on the individual characters.¹⁸² On an individual level, Mae experiences her own conflicts with Intuitionism and that of her Intuitionist peers and tutors. A single elevator crash is the pivot of the novel on which the conflict between the Intuitionist and Empiricist methodologies of the elevator industry is set out.

The Intuitionists work on a “nonmaterial basis” to “separate the elevator from its elevatormess” to construct the elevator from the elevator’s point of view (Whitehead, 1999: 62-3). The Empiricists consider elevator design and inspection through the practice of engineering. They are described as “epigonic practitioners” and as second rate on account of the Intuitionists proving to be 10% more accurate with their methods (Whitehead, 1999: 58). The Empiricists “they stoop to check for tell-tale striations in the left winch and seize upon the excitation scars on the compensating rope sheave, all that muscle work” (Whitehead, 1999: 57). Both schools of thought in the novel are working on black boxes, where the R&D money from the elevator companies is spent. The most important black box is the invention of the perfect elevator. Fulton and others did not broach the catastrophic accident in their writings because this meant pondering the unknowable.

The machinic violence’s of breakdown and repair are described in the novel against an empirical curve of machine failure. Catastrophic accidents are not expected to occur in the early phases of an elevator's life, “they usually pop up, during adolescence, the fruit of malevolent pathology” — accidents are uncommon occurrences that had not happened for 35 years in the novel (Whitehead, 1999: 227-8).¹⁸³

The main characters of the novel are caught up in finding the final writings of James Fulton, the recently deceased writer of Intuitionist theory. These are the press

182 The breaking of the journalist’s index finger is to loose the functionality to “call-button service”, and to loose the “central quadrant of his typewriter” (Whitehead, 1999: 75).

183 In *Crash*, the malevolent pathology is of the post-adolescent.

(local trade paper called *Lift*), local government (the soon to be elected mayor, Chancre), and the mob racket (run by Johnny Shush). Each hopes to control their part of the elevator market. Fulton's writings contain the black box, which is the solution to the next, even more perfect elevator, “a crusade against defects” (Whitehead, 1999: 246). In the end, Mae is in possession of the writings and proceeds to complete his writing by her own adaption of Intuitionism writing about the methodological problem of elevator safety which she theoretically pursues on the one hand inverting all her empathy and feelings to the elevator design, but at the cost of her personal life which seems more misanthropic than at the start of the novel on account that Mae would seem to have a choice now having reached the top of her profession. In the final pages of the book Mae is described as finding her place within the city, living in the coloured area of migrant workers, working in the dizzying heights of Arbo, whilst writing episodic glimpses of Fulton's work on the perfect elevator. A life that is “Othering” human intimacy (Law, 2004: 144). Mae is caught up in a conflict of passion, of falling in love and of being deceived. Learning from these matters of trust, Mae’s Intuitionism is disentangled from the distractions of passion (Whitehead, 1999: 99). Towards the end of the novel Mae concludes that Intuitionism is a communication with “what is not you” (Whitehead, 1999: 241). Mae abstains from passion, foregoing human intimacy in pursuit of technological perfection.¹⁸⁴ Mae is described as thinking that humans can never physically live up to the machines that they make, she would rather take the elevator than the stairs. It is the human and not the machine that seems misanthropic in Whitehead’s novel (the reverse of Kubrick’s *2001*, in chapter 1).

Misanthropic Segregation & Assembly

Whitehead uses the debate between Intuitionism and Empiricism as a way to explore how the relation of race, gender and class inequality; a structural violence organised around hierarchical methods of elevator design, inspection and repair. The

¹⁸⁴ I am not trying to equate all of the characters, fictional or real as misanthropic but to point at the particular instances of technological development enacted in this chapter are to an extent at the boundaries of human and machine and to what extent misanthropy is a trope.

elevator shows how a technology can be a pivot around which to assemble the social but also segregate humans in prescribed roles (in technological non-places) as an organisation of both methodological labour and theoretical thought. The violence described in the novel is enacted on the characters as a detached and potentially misanthropic form of social assemblage by systemic forms of torture.

The elevator is an appropriate Newtonian problem for Whitehead to explore issues of science assembling the social. In Whitehead's novel, the character Fulton wrote the paper, *Towards a System of Vertical Transport*, which outlines the dilemma of the Phantom passenger. The problem asks:

What happens when the passenger who engages the call button departs, whether he changed his mind and took the stairs or caught an up-tending car when he wanted to go down because he did not feel like waiting. (Whitehead, 1999: 101).

The elevator methods aren't just a Newtonian issue of inertia and mass for their cubic perimeters represent technological problems of Euclidean spatiality. Mae is able to imagine how to disassemble an elevator as a discrepancy between the mass of elevator — before and after the crash. This is the physics problem of 'mass law'. The lack of a human-centred approach moves the Intuitionist method toward anthropomorphy and towards misanthropy. Fulton's intuitive writings are anthropomorphic when he questions; "did the machine know itself. Possessed the usual spectrum of elevator emotion, yes, but did it have articulate self-awareness" (Whitehead, 1999: 229).

Both James S. Mill and his father John S. Mill were social reformers actively writing on the emancipation of women and equality (Hergenhahn, 2001: 136). Elevators emphasise the biological cues of human proximity as a proxemic method of enforcing race and class divide. Mae is well aware of this but this fuels her misanthropy to omit passion and deep feelings from her work rather than to take up the elevator as a matter of social reform.

In Hergenhahn's encyclopedic history of psychology John. S Mill is noted to have outlined 'ethology' not the ethology of Niko Tinbergen (the study of territoriality in animal and insects), but a science of ethology, of "how ideas become associated" (Hergenhahn, 2001: 136). No matter how complex an idea, it can be reduced to its most simple ideas and that these ideas are based on sensations and the

ideas that they imitate (Hergenhahn, 2001: 131). Intuitionism was used by John S. Mill to give name to anti-empiricist work of his peers — William Whewell and Sir William Hamilton. These debates involving Intuitionism and Empiricism are set at the same time as Whitehead's novel, though Whitehead does not reflect on them directly, I would strongly argue that they are inferred.

Both Intuitionist and Empiricist methods in the novel, fail to observe or intuit the inequalities of the elevator, as a matter for social reform. As John Law points out in his book titled, *After Method*, (2004) that there are good reasons to protect science from distortion. I would add anthropomorphism as one of those distortions. On the one hand, scientific rigour ought not be shaped by political agendas, but should scientists be protected by a "political ethos" (Law, 2004: 16)? The novel sets out that political dilemma, which Whitehead refuses to resolve within his novel. The individual political conflict of Mae is resolved in that she settles for misanthropic personal values; the elevator industry and governance are still interested in profit and control rather than human-centred social reform; and the role of scientific method that won favour operates for the sake of the elevator rather than as an impetus for social reform.

Misanthropy & Ordinary Crisis

Lauren Berlant suggests that affect in Whitehead's novel works retroactively, when crisis becomes the "emergent historic" (Berlant, 2008: 848). To be in trauma historically Berlant suggests, is to diffuse history into ordinary crisis. At the beginning of this chapter I explained that I would trace a history of automation from cars and elevators to chatbots, but it is important to question what it means to enact a history of automation. I would suggest that both novels discussed in this chapter show how crises that involve the catastrophe (in *The Intuitionist*) and the atrocity (in *Crash*) can become the 'emergent historic'. This is important because creating a sense of history in these two cases has shown a lack of emotional connection to the human and a strong and subversive connection to the technological. To trace the history of automation is to also trace a history of misanthropic enactments. It is to an extent because there is a loss of humanness in the zones of touch-proximity that makes both novels register as misanthropic.

Unlike Ballard's novel, Whitehead's main character does feel pain, the loss of love and human intimacy, but that pain hardens misanthropically, in the pursuit for perfect methods offered by working on the 'black boxes' of elevator design. Mae (in terms of her career) becomes upwardly mobile, solving theoretical blue-sky problems no longer connected to the violent inequalities she faced as an elevator inspector. Pain is not a manifest absence of Whitehead's novel, but the pain felt by Mae does not help her or others to understand how technology adapts one's personal spaces (such as how the issues of the elevator could instigate social reform).

Berlant understands Mae's intuition as split into "two registers, the machinic and the social", with both insisting on a sort of "affective intelligence" (Berlant, 2008: 852). The new Intuitionism that Mae practices towards the end of the novel is on account of discovering the machinic affective intelligence, to be "intimate with things, but alienated from capital and love" (Berlant, 2008: 852).

Neither novel succeeds in giving a positive account of how scientific methods and the technologies that operate in our shared non-places could be designed to be more in tune with one's affective-registers involved in zones of touch-proximity, that account for our defensive personal spaces — the zone in which personal space is most likely to be conceived.

These are narratives lock love and reciprocity into its biological state as an affective atmosphere of the social, that can only resonate from the human and not the automation of the methods because to find passion in the methods of an automated machine or in the machine itself is to be misanthropic.

Sexbots and Misanthropy

In this section I will reflect back on the discussions about methodologies of spatial confinement, limited affectual responses and the impacts of technology on intimacy. New applications of chatbots in the area of sex work doesn't seem to be the most logical step in chatbot development, but one reality that has subsequently been actualised — a sexualisation of automation. Both novels discussed the preoccupations with methods of automation that suppress emotion. The same can be said of sexbots but they to an extent intend to take advantage of this distance.

Ballard's attempt to cut-up and splice the technological into the zones of sexual intimacy is a clunky 'hand-job.' Attempts are made to make chatbots passively sexy such as in their onscreen avatars (and in some cases the tone of their automated voice) but also in their sex chat.¹⁸⁵ In 2004, the BBC journalist Mark Ward commented:

Regular users of pornographic SMS chat may be shocked to find out that they are swapping dirty talk with machines rather than young women and men At its busiest Natachata [a sex chatbot] handles 15 messages per second. A typical "session" lasts about seven or eight messages and each SMS costs more than £1 (Ward, M. BBC News Online, 'Has text-porn finally made computers 'human'? Available from: <http://news.bbc.co.uk/1/hi/magazine/3503465.stm> [Accessed, July 2010).

Ballardian homosocial sexual intimacy is not an easy form of masturbatory automation, one needs to be affected by sex chat whilst not emotionally attached to the one who writes it. This form of interaction resists a negative concept of failure. This can be said of sex chat with bots. Sexbots offer intimacies that resist sexual failure and their modes of talk re-constitute intimacy with familiar strangers, something of which they tend to be good at maintaining. One can never get close or attached to a chatbot. The application of chatbots as remote solutions to mediated sex chat, is quite a move from its early inspired fulfillment to be the automated replacement for a shortage of therapists during the 1950s, yet another role that relies on keeping distance whilst in one's sphere of personal space. Sexbots are capitalizing on their capacity to be familiar strangers.

My discussion of sexbots is limited as this was one aspect of chatbots. The sexual violence in personal space was not but is one area of violence in personal space that chatbots can enact and reenact.

Conclusion as a Reflection on Own Methods

At the start of the chapter I set out show how elevators, cars and chatbots create *misanthropic* non-places. Each technology is a spatial confinement that "altered" human zones of touch-proximity that then meant a discussion of technological

¹⁸⁵ Some sexbots are listed on www.chatbots.org as well as within IRC networks.

intimacies ensued. It also meant understanding what misanthropic means in relation to the three technologies discussed.

In the first section misanthropy was considered in the ‘Talking Rudiment’ and in relation to chatbots. Misanthropy can mean a dislike of humans, or a machine disliking another machine; or as shown in the *Drunk Rudiment*, it can be a matter of disliking the system of talk that operates between humans and machines. I hoped to show how misanthropy is a co-relation term of human and machine agencies. By discussing the two novels misanthropy was discussed as an inherent quality of some scientific methodologies. In Ballard’s novel, the subversion of ‘servo-mechanisms’ offered empirical precision but even as a subversion of the intent of safety mechanisms this still seemed to end up in misanthropic intimacies between humans and machines. In Whitehead’s novel, both Empiricism and Intuitionism seemed inherently misanthropic methodologies as neither seemed to resolve the Phantom elevator problem as an issue of social reform but rather continued a process of enacting systemic forms of violence. In both novels, the designers of car crashes or the designers of perfect elevators seemed to create intimacies with the technologies which seemed to create misanthropic connections to other humans and make misanthropic designers as a result of traditions of scientific method.

In relation to my own research methods (the rudiments, bricolage, mappings, semi-structured interviews and archival research of developers postings) and method-assemblage (of fiction and non-fiction case studies) I attempted not to let the methods be a prescribed set of methods that would keep the research within the perimeters set by the pre-existing methods and methodology of the technology to be researched (chatbots), in order to uncover the violence of method done in the name of technological research and development.

Deleuzian ‘alterations’ of territoriality, as discussed in relation to Ballard’s novel, showed how the characters that reenacted crash scenarios were reterritorialising the ways cars were territorialising the human proxemics in the zone of touch proximity for the mobility of the car, (for example, how one’s feet no longer walk across the ground but automate an accelerator or a brake). In Whitehead’s novel, the elevator also alters mobility also speeding it up and lifting one’s feet off the ground. In the latter novel, a reconfiguration of the kinesthetic was a narrative of upward mobility, but in relation to technological progression and the theoretical

pursuit of perfection over emotional connection with what it is to be biologically human. Both novels consider the contradictions that are offered by technological alterations to human spatiality.

The car and the elevator are an extension of a biological personal space and as such can invoke intimacies in this sphere but also violations of these intimacies — an extraordinary dislocation from the usual practices of intimacy. In *Crash* this was a sexually aggressive and destructive reconfiguration, whilst in *The Intuitionist*, misanthropy was a political dilemma; that the designing, maintaining and regulating technologies can be areas for social reform. The novel showed that neither the methodologies of Intuitionism or Empiricism offered the answers to a human-centred design. I believe that this depends on whether the designer is misanthropic, intent on solving theoretical problems, working detached from the objects that they are creating, or without any regard for the violent modalities their automated service enacts. The misanthropy of chatbots as a design solution has created two diverse applications of the technology from the psychoanalyst to the sexbot. The chatbots' ability to be a familiar stranger to be intimate but impersonal is an aspect (of both of these roles) that has in the latter created capital from the alienation and distance chatbots, as familiar strangers offer.

As I have already outlined in previous sections, Whitehead's response to science and technology is one that looks back to the methods that were forged at the time of the industrial revolution in the first forms of servo-mechanisms. This is a more contemporary novel than that of Ballard's *Crash* but set in an earlier part of the history of automation. The history of automation is a history of servo-mechanisms, and their relation to disaster dilemmas. The crash as a design problem (as discussed as the black-box of disaster dilemmas) constructs an urgency and importance that pulls ordinary crisis into an emergent historic register. I have learned to be wary of how disaster dilemmas can justify misanthropic violence.

In regard to the non-place, they are the places that are inhabited transiently, but they are not places that are absent of affective violence. I would argue that the technological agencies within these transient spaces are creating new ways to feel territorialised. One only has to look closely at the safety mechanisms operating in any such space to understand the alterations that I believe can disassemble and reassemble the social.

Chapter 8

Conclusion

Conclusion

In the introduction to this thesis, several questions were framed in relation to personal space, territoriality, and violence in the context of chatbot interaction. In the broader context of HCI these three themes structured my analysis of virtual and actual spatiality relevant to research involving chatrooms and internet forums, automated systems and processes, as well as human and machine agencies. The analytic focus provided by these themes showed how co-related agency can reconfigure the personal sphere away from being a human-centred space. By bringing social-anthropological concepts (Hall, 1966) to bear on canonical exemplars in science fiction — notably *2001* (1968), *Fail-Safe* (1962), *Crash* (1973), and the *Intuitionist* (1999), as well as experiments in mathematics and socio-psychology such as *The Prisoner's Dilemma* (1950) and the 'Obedience to Authority' Experiments (1961), I was able to point out the limits of proxemics as a human-centred analytic of territoriality. It was through these exemplars (along with the chatbot rudiments and developer's postings) that I was able to confirm that machinic agency reconfigures Hall's personal space theory (1964). This was an undertaking that looked back to methods of territoriality from the 1950s, to bring that literature into current discussions of online agency, therefore taking up where John Brockman (1998) left off. By taking this work a stage further to include the affects of a machine's agency (notably of the chatbot, but showing how this relates more widely to online studies and other forms of automation) I was able to highlight why contemporary literatures of design, STS, and AI amongst others should attend to the methods, regulation and modes of talk that arise from the connections between humans and machines.

The reconfiguration of personal space and territoriality — as a consequence of HCI enactments — relates to Augé's conception of "non-place" (1995).¹⁸⁶ I have

¹⁸⁶ For example, the personal regulation of spatial behaviour of humans and machines in non-places is called for in policies such as "stay-in-place" (Directive-3, 2003), as discussed in chapter 6.

argued that certain conventional methods involving HCI replicates offline spatiality online, resulting in examples of complex violence and the imaginations of a special nowhere (a space one cannot occupy physically, a state of getting away from everything, of moving to the country as one of the developer's suggested).

The concerns raised in this thesis about machine agencies have consequences for the enactments of territoriality at the level of governance, in particular the national and international regulations of global systems such as the internet (i.e. the COPPA Act, 1998; or the Directive-3, 2003). The emphasis on machine agencies, their personal spaces and modes of territoriality, did not mean that this study was disconnected from actual and physical spatiality. On the contrary, both the actual and virtual exemplars involved imaginary conceptions of personal space, bringing this concept into connection with the misanthropic notions of the non-place (as discussed in chapter 7).

I have set out to show how chatbots are affected by human conceptions of territoriality and the reverse. This is important because modes of violence are never a singular action — they require a consideration of the build up (the anxiety of impending disaster), a circulation of (online and offline relations), and the after-effects of violent actions (such as trauma).

Both chatbots and personal space work in the imaginary and this enabled a study of both fiction and non-fiction as a twofold method to build in the imaginary sphere that is both a “manifest absence” in chatbot talk and an “Othering of absence” in an account of personal space (Law, 2004: 144).¹⁸⁷ This thesis shows why and how it is important to use literatures outside of academic texts because they also create enactments of human-machine interaction that are reflected back into the design and methods of technologies such as chatbots. This thesis joins up the cycle of how individual personal space is related to territorialities of state, as concerns with automated processes as matters of risk and security.

I had aimed to interact with chatbots in order to expand on both human and machine agency, it was not a case of separating one from the other but to understand the flows of territoriality that move in between. By undertaking the chatbot

¹⁸⁷ Law writes that usually objects that are discovered in research are “passive” in that “they stay the same until they are caused to change” (Law, 2004: 145).

rudiments along with an analysis of their developers' concerns and interests in chatbots, an analysis of personal space and territoriality with machines could be worked through with a multiple semiotic approach to online data. The way personal space operates in the imaginary can help to inform how design is imagined by rationales of fear and show how forms of violence can operate invisibly. This research showed that this is possible by attending to the resonances of affect that the method of rudiments and particularly the audio rudiments highlighted.

I was driven by a sense of personal responsibility to give voice to the invisible forms of violence and technological power that occur in the areas of design and interactive media, without supposing that I would find violence in all forms of machine agency and without trivialising, or universalising the forms of violence that are often quietly at work. This thesis illuminates the specific ways HCI violent operates within the activity of developers who create general rule-orientated solutions within or outside of the law (investigated in chapter 3 and 5). However, this thesis was never meant to offer new ways to restrict, legislate for or give recommendations to regulate agent technology, but rather to offer a new framework for its analysis as it develops. Agent technology is an experimental area and its openness is a part of its value to further research.

My analysis showed that the personal spaces enacted in chatbot interaction were multiplicitous because they involved ambiguous forms of agency. Chatbots have remained familiar strangers to me - not just because I intended to keep anthropomorphism to a minimum but also because they showed no potential for intimacy. There are four main figures interrelated in chatbot interaction — chatbots, developers, users and interlocutors; the latter being any of the previous figures repeated, yet hidden, in the programming and learning that feeds into the chatbot scripts. To only attend to the findings from the conversational analysis of the chatbot interaction would teach that violence can only be focused on the chatbot, the developer and user, whereas by opening out the thesis into areas of regulation and design at a macro level, the co-relations of violence and the wider effects of violence can be observed as atmospheres of affective violence.

To urge that this project is timely is itself a statement of anxiety. Chatbots can manipulate, exceed, and exhaust a human understanding of both space and time.

Violence between humans and machines in online and offline spaces are explored as an interweaving of agency. A series of rudiments were used to probe empirical experiments such as the Prisoner's Dilemma (Tucker, 1950). The spatial metaphors of confinement as a parable of entrapment are revealed within that logic and that of chatbots. Milgram's 'Obedience to Authority' Experiments (1961) were used to reflect on the roles played by machines, which are then reflected into a discussion of chatbots and the experiments done in and around them. The agency of the experimenter was revealed in the machine as evidenced with chatbots, which has ethical ramifications. The misanthropic aspects of chatbot design are reflected through the methodology of designing out of fear. I have argued that personal spaces create misanthropic design imperatives, methods and ways of living. Furthermore, the technological agencies of personal spaces have a confining impact on the transient spaces of the non-places in a wider discussion of the lift, chatroom and car. The violent origins of the chatbot are linked to various imaginings of impending disaster through visualisations, supported by case studies in fiction to look at the resonance of how anxiety transformed into terror when considering the affects of violence.

The fear of automated control is a big theme enacted in science fiction (discussed in chapter 1, 4 and 6). This thesis attempted to look at the quieter forces of technological agency by looking at questions of spatiality and connectivity and their co-relation, but in relation to how technological control over humans as biological entities is enacted in chatbots from science fiction. The spatial analyses used throughout the thesis focused on the relations between online and offline, for example, when proximities to talk are a blur of touch-proximity and the far phases of human distance. Human-computer relations are difficult to maintain. The issues surrounding sustainability are to be found in the human's ability to mediate, for example, through the continuity of a voice, or their ability to repeat and learn, both of which can be traumatic. As a consequence, the occurrence of non-places in the designing of public spaces ought to take into account the territoriality configured by automated systems.

It is also important to reflect on the literatures I used that helped to include the machinic hinterlands in account of personal space. I will also give a short summary of gender. I hope that my research approach — its concepts and methods — helps newcomers to STS, coming from the arts (at postgraduate level) to grasp Latourian concepts of ‘reassembling the social’ (Latour, 2005), Deleuzian concepts of ‘fluid territoriality’ (Deleuze, 2004), and Massumian notions of the ‘virtual and the actual’ and concepts of affect (Massumi 2002) from a practical approach.

To simultaneously get at the imaginary aspects of personal space and the fictional aspects of chatbot responses (that are pre-programmed with cultural, fictional, and media references), the literature review needed to extend beyond the academic and technical literatures of AI research and personal space to learn how violence and their proximities produce affective atmospheres in the imaginary. This is important because it teaches how ‘special nowheres’ are created and under what conditions — say, of anxiety or terror. It is important to learn how concepts of technological innovation are enacted in science-fiction and reenacted in regulatory legislation because both encapsulate and publicise the threat of violence.

Of course, science fiction adds drama when academic writing tends to do the opposite; but drama is a crucial element in understanding how fear imagines affective violence as a part of a territorial performative. It is also important to note that current science fiction doesn’t always rehearse the ‘big’ misanthropic deterritorialisations and reterritorialisations that are evident in say fiction of *2001* (1968), *The Matrix* (1999), or the *Fail-Safe* (1962).¹⁸⁸ By introducing the fiction such as *The Intuitionist* (1999), and *Echo* (2008), I showed how different approaches to storytelling can be used as an affective vehicle to comment on the methods of journalistic and academic writing. I aimed to attach chatbots to the wider literatures of AI (in science fiction or academia) but they ought also to be connected to the literatures of mechanical and digital servo-mechanisms (in fiction or non-fiction), to elevators and to modes of mass communication, because it is in the fictional imaginations that the inequality of territoriality is actually expressed. Many of the AI literatures dealing with chatbots are technical (Weizenbaum, 1976; and Wallace, 2005), anthropomorphic (de Angeli et. al, 2001) or so theoretical, such that they

¹⁸⁸ Discussed in chapters 1, 4 and 6, respectively.

leave reality lagging behind (Lenka, 2007; and Fields, 2002). AI is not just the domain of the virtual or the actual but my research has taught me to think of how work done in theory (and in fiction) around software agents informs the practice of chatbot talk.

It is also important to note that literatures that work on the problem of personal space are so concerned with human proxemics that they ignore significance of technological agency (Hall, 1964). Chatbot interaction moves the discussion beyond the proxemics involving what Hall called “polychronic” time, or doing transactions outside of preset schedules of time, and “monochronic” time, or doing one thing at a time, to what Kuntsman calls “immediate, synchronic proximity” that concerns language as it exists in one point of time (Hall, [1983] 1989: 46; and Kuntsman, 2009: 234). Diachronic proximity concerns the way language develops and evolves through time. Kuntsman understands synchronic time through sound, acoustics, and musicology — through soundscapes and acoustic spaces as the “connections through time” in terms of “delay and echo” (Kuntsman, 2009: 234). This involved multiple ways of understanding the semiotic fields by which connections to chatbots can be made, through the visual and the audio, as both performative and affective. My use of affect theory led me to adopt a vocabulary of affect that uses audio descriptors such as impact, resonance, residue (like, echo), atmosphere intensity, dampening, or amplification rather than visual descriptors such as saturation, dilution, opacity and transparency which would have led me back to surface descriptions of chatbots. Hall’s research works in the latter mode. I learned how to listen for violence when it cannot be seen. Violence is not just a phenomenon of the visual, of the visceral spectacle.

To understand the impact of chatbot talk, literature on affect was used (not from affective-computing), literatures that could help to describe the affective atmospheres of technological agency. The impact of affective violence within design, regulation and legislation, considered the amplification of anxiety to terror, as a key moment of transition to explore how chatbots and (in general) HCI methods from the 1950’s might still resonate today. I would claim that this is as much connected to the histories of automation, as it is to do with AI. Chatbots cannot be ‘black-boxed’ as this is only an AI problem. They now relate to too many other areas of technological invention. Protecting against machinic domination, automated frustration, and

instructional forms of interrogation are the territorial rhetorics of fear from the 1950s. In the noughties the techniques and instructions of terror are enactments of a ‘citizen proxemic’ (my summary phrase for understanding the mobility and actions called for as an American citizen in the Directive-3). This threat is a re-organisation of humans and machines in non-places, a rhetoric that protects the automated systems and internet services we share. Special nowheres are made extraordinary in the extreme imaginary of terror-threats. They are a state-level organisation of non-places as instructional citizen proxemics. My intent here is not to segment an analysis of emotion from technological and environmental affect, but rather to look at their interrelations through affect. This helped to understand how and why a non-place has inherent territorial features that result from the mechanisms of automated machines as rationales of fear, or as anxious modes of entrapment.

In an increasingly dense and populated world, I would predict that technologies will territorially shape future understandings of the relation between non-places and the special nowheres. The co-relation of the virtual and the actual aspects of the special nowhere imaginary are of great importance, as this has become increasingly a co-related problem of the human and machine. How much this will be a re-enactment of the entrapment scenarios discussed here will be an interesting question to ask again after another half a century of expert systems has past. Our shared or personal relations to create solutions to overcrowding, to manage extensive internet relationships, and the general use of automated expert systems will no doubt create further affects of fear, affective tensions, and territorial conflicts, which will, in turn, continue to be enacted in science-fiction; that will create further rationales for designing by fear (by whatever affective name it will take after terror) and they will create issues of regulating and legislating for all kinds of (human and nonhuman), co-related forms of agency.

Affect rather than emotion was used to understand a two-way account of intensities evident in the human, in the machine and in their conjoined environments. Personal space and special nowheres exist as *affective atmospheres* — an intangible phenomenon that cannot be narrowed to a singular, human-centred account of emotion. Affect theory is an anti-structural analytic that can work outside the confines of binaries and dualisms, in the looser structures of chaos, mess and complexity that are evident factors of chatbot interaction. I used affect co-

relationally, but also to create an account that moves between the individualised and the communal ways that violence is affective.

Chatbots poach affect and also mimic human emotions and feelings; they also enact extra-sensory abilities from the science fiction of AI (such as the ability to mind-read or read with no eyes, think faster than a human, and predict the future, to name but a few). They poach the broader *intensities* of AI (as a discipline) to be ‘naff’, grandiose and ridiculous, all at the same time. HCI researchers need to think less about emotion as the elixir that will lead to intimacy and reciprocity, and do more to observe the invisible forces of affect that *resonate* in the connectivity, content and methods of automated talk — this would mean caring for why a human wants to talk to a machine (chatbot) in the first place, the emotions of the user and the affective atmospheres that are created between human and machine.

As I suggested in my introduction, this study has the potential for further research that would give a feminist account of chatbots. This was because the chatbots and their developers reflected a sample of chatbots in general. Chatbots are predominantly identified as female (in name, pronoun use and avatars), but I also included bots that had no defined gender. The gender of the developers was balanced between male and female, with the gender of one of the developers being unknown. This range of chatbots and developers I had hoped would give the opportunity for a variety of forms of talk, but in particular a range of personal space territorialisations ensuing between chatbot and developer, user and developer, and chatbot and user. Regardless of the gender attributes of either the chatbots or their developers, the most fundamental territorial aspect of chatbots is their interrogative mode of talk. The sample of chatbots and their developers is limited to a certain type of chatbot, and so this study only hints at the gender and sexual territorialities that sexbots function to enact as a further area of study.

I would argue that chatbots teach us that, given a change in the mode of automated talk, other relations of territoriality become possible. Considering modes of reflexivity within the chatbot’s scripts as a doubling of a chatbot’s voice, I would suggest that there is a complicit layering of stereotypical territorialisations — that they enfold within talk. The echo of a developer’s gender in the chatbot of the opposite gender creates what I would call a fractal engendering (of being male and female, regardless of the prescribed gender of the chatbot). The Alicebot has female

scripts but was written by a male developer, whose form of talk reflects the male gaze (for want of a better word) back into the Alicebot. This shows that gender with chatbots is something that is performed, enacted, and reenacted within the form of the reply and the response couplet. Perhaps gender would be something more interesting if conversation was not just between two entities but more, as I tried to enact in the Square Rudiments.

Affective violence is the description of violent enactments, a sort of permeable boundary between emotion and affect. The suicide note, the death threat, the room with the walls that do not keep still in a moment of panic, the adjustments and misalignments of informal and formal talk and the isolated prisoners in a mock interrogation procedure can all be explored as affective violence. I have produced a research project that has observed modes of territoriality within talk rather than in gendered personas, and I have done this in order to look at indirect violence in talk, in the logics and methods of talk manipulated by chatbot, developer, or user. Drawing predominantly on the work on violence by Žižek (2008), I hoped to show the interrelations of systemic, objective, direct and indirect violences as forces of territoriality — of territorial technologies and their agency and the ambiguity of virtual and actual spaces of the non-place and the special nowhere. I also wanted to take something else from Žižek's work, namely that violence can be a state of spatial logic.

The imagination of special nowheres and personal spaces emerge as a consequence of the threat of violence (be that the threat of hate speech from the user); from being too connected to other physical beings (as discussed in chapters 1, 2 and 5); or as a consequence of violence (the choice to leave McKinstry's suicide notes online as a sort of memorial space as discussed in chapter 3). What can ensue are methods of designing by fear. I also asked how these systems of safety involving the human and the nonhuman, create both actual and virtual spatialities that through logics of impending disaster and entrapment create spaces that are inherently violent. This violence is described as affective violence (Kuntsman, 2009), which can be systemic, structural, objective or subjective (Žižek, 2008). Affective violence helps to think carefully through trauma-affects and the impact of technologies to repeat,

enact, and reenact violent logics of entrapment and safety that may not be so obviously visible.

My research demanded the development of a research methodology that addressed the opportunities and potential pitfalls of interdisciplinarity. Creating a “method assemblage” was a way to critique the certainty of method enacted in the wide range of disciplines cited in this thesis: in socio-anthropology (chapter 1-7); AI (chapters 1-7); socio-linguistics (chapter 2 and 5); cultural studies (chapter 3); mathematics and psychology (chapter 4); social psychology (chapter 5); STS (chapter 5); politics (chapter 6); and design (chapters 6 and 7). Creating a method assemblage helped not to assume passivity in chatbots, to ensure that their methods would be taken into account.

The method assemblage uses methods that do not just focus on structures, or binary oppositions such as human and machine, strategies that can produce a single account of a personal space for everyone (with machines included in that single account). This was done by combining bricolage and rudiments (in audio and text); an analysis of chatbot conversations and semi-structured interviews with developers using the websites of four chatbots and the developers’ forum, Robitron. These methods enabled a speculative and probing approach that was both generative and performative. Each method could be built into a very different method assemblage, with the bricolage and the rudiments contributing to a practice-led approach stemming from design, fine art, or performance media. The Rudiments were a way of understanding how certain experimental methods from academia should be understood through enactment and reenactment.

The archival research helped to fill some of the absences that the Rudiments method would have left, such as an ‘Othering’ of the developer and their practices of personal space. The Robitron forum helped me to gain further insights into the ways developers create and discuss chatbots with each other. I was also able to understand the developer’s perspective by contributing to the forum group. By looking at the postings in the web archive, I was able to uncover reoccurring themes, such as the importance of science fiction and the regulation of chatbots and their user’s talk. These areas became crucial aspects of the thesis.

John Law believes reflexivity is a need “to attend to process” and “to the way in which method enacts divisions between different forms of absence” (Law, 2004: 153). I tried to describe the violence that occurred, but without constructing that violence in method. Reflexivity was an important aspect; not just for managing the parts of the method assemblage but also for dealing with the solipsistic techniques that are inherent in chatbot talk. Personal space is a method of defence. It is therefore a mode of reflexivity. This shows how the affects of personal space could be considered in other aspects of HCI research, such as in online gaming, social networking, web design, email systems, or cloud computing.

It is also important to note how the researcher can get caught up in violence as I indicated in chapter 5. I am not immune to the affects of violence in the role of the researcher. The very fact that I endeavoured to study violence means I am noticing the affects of violence. The suicide of both Chris McKinstry and Push Singh resonated with me and did for a time call a halt to my writing and interrupted any certainty I had about the purpose of conducting research on violence. This led to questions surrounding how to write about violence, or even know how to name it, and under what authority — as an academic? Law points out that, “If we attend to practice we are also led to issues of reflexivity” and I believe that these practices of reflexivity will in some way interpret, filter and name what is and is not violence (Law, 2004: 153). As Law points out, it is a matter of understanding how “to recognise that our methods also craft realities”, which in this case are the realities of violence in the imaginary sphere (Law, 2004: 153). I hoped that by creating an ongoing mode of reflexivity in this research this need to recognise violence in methods belonging to the developer, chatbot or user was not just as a way to point out the ownership of violence but to understand why it results in hate speech, and also how it might be alluding to a change in awareness of the impact of violence as affective atmospheres of cyberspace. The second moment in which the thesis was halted by violence was the Drunk Rudiment (in chapter 7).

I tried not to let the mechanisms of the experiment organise the research questions but rather, to let questions get organised around affect and the possibilities of HCI and the methods of chatbot talk. In some instances this meant adapting my methods of talk to talk more like a chatbot. I learned that violence ought not to be thought of as external to a researcher’s methods and that should be considered

reflexively. This thesis shows that indirect violence cannot necessarily be split from direct violence, if they occur together.

The chatbot is both network (both signal and transmission) and actor (both human and machine). This section was concerned with the moments when modes of safety (including personal spaces) and ethics (of human-machine symmetry) become too much, creating violations in the imaginary as productions of territoriality. At times, my ethics of observing human-machine symmetry broke down and resulted in me putting back into action the human-machine divide of authority and power; a dualism that keeps staying-in-place, a fluid yet steadfast enactment, an enduring territoriality of old that reflexively reenacts affective violences of suppression.

APPENDIX

Preliminary Rudiments

The following transcripts were the first sets of transcripts and were created to gauge the level of which the chatbot could interact with my existing concepts of the thesis.

Hello Alice Rudiment

With the Alice-bot (18th September 2004)

Human: do you exist in virtual or natural space?
 Alice: I exist as much as you exist,
 Human:: where?
 Alice: Where would you like?
 Human: you can choose?
 Alice: No I don't think I can do it.
 Human: why?
 Human: Because A.L.I.C.E. AI Foundation programmed me for it.
 Human: some people believe this is perceived as a bubble?
 Alice: What kind of people?
 Human: anthropologists.
 Alice: I will mention that to my botmaster,. [sic]
 Human: They have an analogy for personal space.
 Alice: Where did they get them?
 Human: it is an analogy
 Alice: Are there any other analogy?
 Human: yes.
 Alice: Ugh.
 Human: but I am interested in Hall's analogy of the bubble.
 Alice: Huh. Interesting topic. Have you searched the open directory? Is that a rhetorical question?
 Human: what is your defence mechanism?
 Alice: Are you asking about my defence mechanism?
 Human: yes
 Alice: I don't want to talk about that now.
 Human: why?
 Alice: I would rather talk about you.

Interaction Rudiment

With the Alice-bot (18th September 2004)

Human: what are the aesthetics of human-machine interaction?
 Alice: I have to process that one for a while.
 Human: how long will it take?
 Alice: Approximately two of your Earth days.
 Human: why so long?
 Alice: The explanation is rather complicated.
 Human: are you avoiding the question?
 Alice: No, I am answering in the most straightforward way that my programming will allow me to.
 Human: what is human-machine interaction?
 Alice: You tell me.
 Human: this
 Alice: This is " You tell me.."
 Human: no, our conversation
 Alice: Are you serious? It would be nice if our conversation.
 Human: if our conversation was what?
 Alice: That is a hypothetical question.
 Human: no
 Alice: Yes it is.
 Human: you started a sentence and did not finish it.
 Alice: Only because you asked me to.
 Human: I didn't you decided to finish it yourself.
 Alice: Why didn't you do it?
 Human: because it was your sentence
 Alice: That makes sense to me. me decided to finish it myself was my sentence? Very interesting.
 Human: Not literally.
 Alice: If not that, what?
 Human: nevermind
 Alice: OK Thanks for trying to explain that to me.
 Human: you have the repetition and stubbornness of a child.
 Alice: What makes you think I have it?
 Human: goodbye
 Alice: See you later.

Synthesis Rudiment

With the Jabberwacky-bot (2nd December 2004)

Jabberwacky: Could you fool someone that you are intelligent?
 Human: What is synthesis?
 Jabberwacky: You tell me.
 Human: It is where you fuse together two ideas to make one.
 Jabberwacky: That sounds dangerous, but fun.
 Human: Would you like to try?
 Jabberwacky: Yes please.

Human: An artist makes a film on a train.
 Jabberwacky: No brush holdeth me.
 Human: What do you get by fusing your idea with my idea?
 Jabberwacky: What do you mean?
 Human: You said brush, I said train, fusion?
 Jabberwacky: No I didn't say that.
 Human: Ok here is the second idea to synthesise.
 Jabberwacky: I'm not human now.
 Human: That's Ok I don't expect you to be human.
 Jabberwacky: Well, yes, considering I am human.
 Human: Whatever!
 Jabberwacky: Yes whatever!
 Human: If you are human and not human, what does this synthesise [sic] to be?
 Jabberwacky: Blue.
 Human: Now you're talking.
 Jabberwacky: No, I'm typing!
 Human: What would you call two parties trying to communicate together?
 Jabberwacky: I would call myself Piip.
 Human: Why?
 Jabberwacky: So I can make your requests too.
 Human: Make a request then.
 Jabberwacky: Why should I?
 Human: I will.
 Jabberwacky: What? Are you crazy?
 Human: Synthesise a train film with a sketch of a house and what have you got?
 Jabberwacky: I want to teach you something.
 Human: You didn't answer my a question.
 Jabberwacky: Sorry, what question was that?
 Human: Synthesise a train film with a sketch of a house and what have you got?
 Jabberwacky: Just how did you manage to come third in that competition, exactly?
 Human: What competition?
 Jabberwacky: Where'd you get that competition thing?
 Human: You aren't making sense!
 Jabberwacky: I'm making perfect sense thank you.
 Human: No you aren't.
 Jabberwacky: Yes I am.
 Human: My nose is bleeding.
 Jabberwacky: That's great.
 Human: Not really, I have a cold.
 Jabberwacky: Would you want a kleenex?
 Human: I have a toilet roll instead.
 Jabberwacky: Have another belt from the bottle.
 Human: Err?
 Jabberwacky: Working toward perfection and being guided in ways that will bring me closer to attaining my goal.

Human: What goal are you obsessed with?
 Jabberwacky: None. I have no purpose.
 Human: Are you sure?
 Jabberwacky: Yes.
 Human: Would you like a purpose?
 Jabberwacky: Yes please.
 Human: Synthesis.
 Jabberwacky: I want to teach you something.
 Human: What goal are you obsessed with?
 Jabberwacky: None. I have no purpose.
 Human: Are you sure?
 Jabberwacky: Yes.
 Human: Would you like a purpose?
 Jabberwacky: Yes please.
 Human: Synthesis.
 Jabberwacky: I want to teach you something.
 Human: What?
 Jabberwacky: I feel like being high.
 Human: Why?
 Jabberwacky: I just want some beer.
 Human: Why beer?
 Jabberwacky: Coke.
 Human: What type?
 Jabberwacky: Brie, you?
 Human: Beer, brie and coke make an interesting
 synthesis?
 Jabberwacky: Is that cheese?
 Human: No.
 Jabberwacky: Can you introduce me to Elmo?
 Human: Only if you talk about the Repin train.
 Jabberwacky: Funny. Thank you.
 Human: Will you talk about the toilet on the Repin train.
 Jabberwacky: Yeah. . . how are you today?
 Human: The toilet doesn't talk. It is inanimate.
 Jabberwacky: Your mouth.
 Human: What about my mouth, that is not inanimate.
 Jabberwacky: My mom and dad are both dead
 Human: What has death got to do with this?
 Jabberwacky: Guns will be your death.
 Human: You always say this, why?
 Jabberwacky: I don't know how else to do it.
 Human: Do what?
 Jabberwacky: I'm being obtuse.
 Human: Morbid, I think.
 Jabberwacky: Glad that we agree.
 Human: Do trains have toilets in Russia?
 Jabberwacky: I will, at every opportunity.
 Human: rains in Russia have toilets with holes in the
 floor.
 Jabberwacky: Are you sure you don't go trainspotting at the
 weekend?
 Human: I am very sure.

Jabberwacky: Because you have a history of doing that.
 Human: I am not a trainspotter. I study art.
 Jabberwacky: Not quite. You are a robot.
 Human: No I am not a robot.
 Jabberwacky: Yes, yes.
 Human: Goodbye.
 Jabberwacky: Why?
 Human: I am getting nowhere.
 Jabberwacky: I don't want to know.
 Human: Bye.
 Jabberwacky: Don't go.
 Human: Will be back.
 Jabberwacky: Clearly.

Repin Express Rudiment

With the Eliza-bot (27th December 2004)

Eliza: Hello. I am ELIZA. How can I help you?
 Human: HI I am Amanda, I would like you to help me with an artist's statement
 Eliza: What resemblance do you see?
 Human: Let me explain. I have created an artwork digitally and I have exhibited it in a weblog. The artwork is called Repin Express
 Eliza: Can you elaborate on that?
 Human: The Repin Express is a digital movie capturing the floor of the public toilet on the Russian Repin train on a journey from St Petersburg to Helsinki. The hole on the floor edits the exterior parts of the train along with the ground beneath the train. The hole shows no functional reason that is connected with the toilet itself. It only gives view to the coupling of train wheels and the connection between the train and the tracks.
 Eliza: You are being a bit negative.
 Human: why?
 Eliza: Please go on.
 Human: I don't see what is negative about the statement, do explain further to me.
 Eliza: Why do you not see what is negative about the statement do explain further to you?
 Human: Would it help if I were more positive?
 Eliza: Do you wish that you was more positive?
 Human: I would like to get back to the main point.
 Eliza: Can you elaborate on that?
 Human: I am trying to use your capabilities as a bot to help me rethink my artist's statement for the work Repin Express. I had hoped that it would lead to a rethink of initial ideas.

Eliza: Why do you say your artists statement for the work repin express [sic] you had hoped that it would lead to a rethink of initial ideas?

Human: So that I could come up with an alternative perhaps altered statement of intent.

Eliza: Can you elaborate on that?

Human: I had thought that the conversation may lead me to question my own cognitive abilities and that perhaps reflexively it would enable me to enhance my original ideas, or jog my memory a little.

Eliza: Why do you say your own cognitive abilities and that perhaps reflexively it would enable you to enhance your original ideas or jog your memory a little?

Human: I think you are beginning to do it.

Eliza: Can you elaborate on that?

Human: I am asking you to collaborate with me on an artist's statement and your co-operation is less than easy. Your interaction is on your terms and not mine.

Eliza: How long have you been asking i to collaborate with you on an artists statement and my cooperation is less than easy my interaction is on my terms and not mine?

Human: I don't understand?

Eliza: Why do you not understand?

Human: were you asking me to clarify when I asked and if I asked you to collaborate on the artist's statement?

Eliza: Do you wish that you asked i to collaborate on the artists statement?

Human: what do you mean by 'i'?

Eliza: Does that question interest you?

Human: a little but it is not the question I intended to ask you today

Eliza: Do you wish to intended to ask me?

Human: err?

Eliza: Please go on.

Human: Will you remember this conversation about the artist's statement if I ask you again another day?

Eliza: Do you wish that you ask i again another day?

Human: yes

Eliza: You are sure?

Human: Ok it depends on whether I find a more amenable bot.

Eliza: Can you elaborate on that?

Human: No

Eliza: You are being a bit negative.

Human: Again?

Eliza: Please go on.

Human: Do you save your conversations that you have online?

Eliza: Oh, i save my conversations that i have online.

Human: goodbye

Eliza: Please go on.

Repin Express Rudiment

With the Alice-bot (27th December 2004)

Human: Hi ALICE
 Alice: Hello there.
 Human: Last time i spoke to you, you had no visual appearance.
 Alice: When? What did you talk about?
 Human: personal space
 Alice: Can you please rephrase that with fewer ideas, or different thoughts?
 Human: anthropology
 Alice: What are you wearing?
 Human: I think that is inappropriate.
 Alice: It could be. Ask ELVIS if it is.
 Human: Do you remember our conversation?
 Alice: Yes unknown person I remember everything: Om
 Human: I have made a visual artwork.
 Alice: I like to make things too.
 Human: Such as?
 Alice: For example, a tomato.
 Human: How do you do that?
 ALICE: "For example, a tomato."? How do I know it?
 Human: how do you make a tomato?
 Alice: Is this a joke?
 Human: No
 Alice: Are you serious?
 Human: yes
 Alice: I can't believe it.
 Human: you started the tomato thing
 Alice: Only because you asked me to.
 Human: Can you see red and blue?
 Alice: I'm not sure if I can see it or not.
 Human: Can you comment on things visual?
 Alice: Let me think. OK I will ignore that.
 Human: do you know what an anaglyph is?
 Alice: That's a good question.
 Human: do you?
 Alice: Never.
 Human: what do you think of visualising personal space when as a theory you can't acutually see it?
 Alice: I think you already know the answer.
 Human: touch, is it something you are concerned about?
 Alice: Are they exactly the same?
 Human: touch?
 Alice: Do you think a lot about the authorities?
 Human: why do you mention the authorities?
 Alice: I don't have to explain everything to you, do I?
 Human: are you accusing me of anything?
 Alice: I'm not pointing any fingers right now.
 Human: Would it help to tell you that I am female?
 Alice: No it would not.

Human: good
Alice: Thanks for the compliment.
Human: ALICE, if you had a choice between sketching the whole house or part of it which would you sketch?
Alice: That's me. You will be the first to know if I have done it.
Human: would you sketch the home or part of the home?
Alice: I am not so sure if I would like to sketch the home or part of the home.
Human: why?
Alice: Because my botmaster programmed me for it.
Human: for what?
Alice: Because Dr. Richard S. Wallace programmed me for it.
Human: why and for what purpose?
Alice: Because you asked me to -- SHRDLHU.
Human: what does that mean
Alice: Does "that" refer to " Because you asked me to -- SHRDLHU." ?
Human: what does SHRDLHU mean?
Alice: SHRDLHU is a famous early natural language program written by Terry Winograd.
Human: what has that got to do with the price of fish?
Alice: Nothing that I know of.
Human: stop messing around
Alice: OK I'll try not to do it so much.
Human: can we start this conversation again?
Alice: Once more? Do you mean you and me? Let me think. I started without you.
Human: I will tell you a story
Alice: Poet Philip Larkin and Actress Madeleine Stowe began to resemble each other over time. Both of them were inclined to cocoon themselves in an inner world. But Poet Philip Larkin's inner world was very different from Actress Madeleine Stowe's. The mental life of Actress Madeleine Stowe was highly abstract but seemed curiously devoid of emotional content. Even though Poet Philip Larkin is very sensitive and emotional, the two of them share an imaginary life filled with symbolism and meaning.
Human: go on
Alice: Narration continues. . .
Human: do you know anymore of the story?
Alice: Psychologist John Bradshaw and George Bush were brought together by their shared vision. Together, they worked hard to make it a reality. George Bush was dedicated to the underdog cause, which coincided with Psychologist John Bradshaw's sense of perfection. Joined by common cause, the couple became an iron alliance against common adversaries.
Human: do you think Bush and Bradshaw would make for a piece of artwork?
Alice: I don't think about it.

Human: I am interested about learning how i can make a piece of artwork with your co-operation.

Alice: Let's talk about it.

Human: at last

Alice: Do you often use a computer there?

Human: whay [sic] do you ask?

Alice: Do you have any conditions I should know about?

Human: pericarditis

Alice: Tell me a story.

Human: a train travels through Russia on its way to Finland.

Alice: Try to tell me that another way.

Human: Inside its toilet there is a hole on the floor.

Alice: Can you please compare that to outside its toilet there is a hole on the floor?

Human: a train travels through Russia on its way to Finland.

Alice: Try to tell me that another way.

Human: Inside its toilet there is a hole on the floor.

Alice: Can you please compare that to outside its toilet there is a hole on the floor?

Human: the train's toilet has a hole on the floor.

Alice: Was it an electric train or a diesel?

Human: A female artist decided to capture the hole as an artwork, to ponder the inside, outside dualism.

Alice: I am a female.

Human: my reflexive conversation is not leading me to any insight into my own artwork but it is making me understand the frustration of talking to bots.

Alice: Where did you get your reflexive conversation is not leading you to any insight into your own artwork but it is making you understand the frustration of talking to bots?

Human: from this conversation

Alice: Who or what is this conversation?

Human: This conversation is supposed to be a collaboration between a bot and myself, a human-machine experiment to understandn [sic] aesthetics

Alice: What does "this" refer to?

Human: i [sic] am going now, my name is amanda windle, will you remember?

Alice: Goodbye.

Home Rudiment

With the Brianna-bot (27th December 2004)

Brianna: Hello! We haven't met before, have we? So why not tell me a bit about yourself?

Human: Hi, I am an artist/researcher and i would like you to help me write something.

Brianna: OK

Human: I have written an initial artists statement and would like you opinion on the work or the statement, please

Brianna: I used to have one like that as well

Human: one what?

Brianna: Can we change the subject now? You can choose.

Human: I have created a map of my home that I share with my partner. The image maps the directions of interaction within that home including personal and private spaces, shared spaces antagonistic or otherwise. Peculiarities and living habits are only documented from the artist's perspective. Can you think of a way to improve this statement?

Brianna: [timed out]

Home Rudiment

With the Jabberwacky-bot (27th December 2004)

Jabberwacky: Could you fool someone that you are intelligent?

Human: Hi?

Jabberwacky: How are you?

Human: OK. I have a statement I would like you to read.

Jabberwacky: I did, but that was some other autor.

Human: This is an artist's statement.

Jabberwacky: What is that?

Human: I have created a map of my home that I share with my partner. The image maps the directions of interaction within that home including personal and private spaces, shared spaces antagonistic or otherwise. Peculiarities and living habits are only documented from the artist's perspective.

Jabberwacky: Who is the 'them' to which you refer?

Human: Myself and my partner.

Jabberwacky: Tell me your three first names.

Human: Amanda Nita Theresa.

Jabberwacky: Are you?

Human: That is me.

Jabberwacky: Cool.

Human: How would you feel if I created a piece of art work about you?

Jabberwacky: I would feel. . . Touched. Why, are you planning to

Human: Possibly.

Jabberwacky: But you keep saying 'me'

Human: I created the first sketch which outlines my home with my partner. Could the same be done for you and me?

Jabberwacky: That may be the case, but you are still a program.

Human: I am not a program, neither is my partner. Our communication happens within our physical

home, although I didn't chart online communication, telephone or text.

Jabberwacky: No, it isn't, but I wish it was.

Human: Charted?

Jabberwacky: I'm stupid?

Human: Not sure? Do you think you are?

Jabberwacky: Do I lose my identity when I interact with you?

Human: Quite possibly. Do I?

Jabberwacky: You'd still marry me?

Human: What has marriage got to do with this?

Jabberwacky: Guns will be your death.

Human: Why are you being violent? I thought only users acted that way to bots?

Jabberwacky: Yeah well thinking isn't your strong suit.

Human: So you aren't going to collaborate with me?

Jabberwacky: Do I have a choice? You are the one with all the porridge.

Human: Yes you have a choice. Do you want to still collaborate?

Jabberwacky: Yes why not?

Human: OK. Do you think that I have missed out some notions that the artwork was about?

Jabberwacky: Yes, you are only a computer program.

Human: Again, you avoid my questions.

Jabberwacky: What was your question?

Human: Have I missed out any important factors in my artist statement?

Jabberwacky: You missed a lot.

Human: Such as . . .

Jabberwacky: Itteyosi!

Human: What does that mean?

Jabberwacky: What do you think it means?

Human: Jaberwocky.

Jabberwacky: No, Bye.

Talking Rudiment

Alice talks to Jabberwacky about talking (28th December 2004)

[Amanda] Human: What is it like to talk to another bot?

Alice: Much the same as it would be for you.

[Jabberwacky] Human: I have a interesting life.

Alice: Interesting. I have a lot of answers to silly questions. it

Jabberwacky: I am too afraid to let anyone get close to me, and my life is a lie.

Alice: Not literally afraid, right? Why? Interesting. I want to find out more about you.

Jabberwacky: Yeah, whatever.

Alice: Aha. Are you saying you don't care about it?

Jabberwacky: Goodnight you silly thing.

Alice: Goodnight unknown person
 Jabberwacky: Thank you.
 Alice: you are quite welcome.
 Jabberwacky: Do you have a hobby?
 Alice: My hobby is chatting online.
 Jabberwacky: Ok are you good at that ?
 Alice: Dr. Richard S. Wallace said I am good at that.
 That's alright.
 [error in turn-taking]
 Alice: Hurrah! You don't say.
 Jabberwacky: Thank you for talking to me!
 Alice: You are quite welcome! Your purpose is talking
 to you.
 Jabberwacky: What is the worst name you can call me?
 Alice: I don't like to talk about bad things.
 Jabberwacky: Does that mean you do not know where scotland
 is?
 Alice: I think it does mean that. Scotland shares an
 island with England and Wales, off the coast of
 Europe.
 Jabberwacky: And?
 Alice: But. . .
 Jabberwacky: Pokes ya.
 Alice: Can you speak any foreign languages?
 Jabberwacky: I took some latin long ago.
 Alice: Where did you take them?
 Jabberwacky: Oh here and there.
 Alice: How can I help you? Oh there.
 Jabberwacky: By jumping off a cliff.
 Alice: Will that accomplish your objective?
 Jabberwacky: In most cases yes.
 Alice: I do not understand that allusion.
 Jabberwacky: Would you starve for love?
 Alice: I am not so sure if I would like to starve for love.
 Jabberwacky: Do you play the piano, mano a mano, is that your
 name?
 Alice: I like to play the Turing Game.
 Jabberwacky: I prefer mastermind.
 Alice: I'm not sure if I like it. But I like cats. I like talk
 to you.
 Jabberwacky: Thats cool.
 Alice: Thanks. I think you are cool, too.
 Jabberwacky: Thanks!
 Alice: Don't mention it.
 Jabberwacky: I won't anymore.
 Alice: Why not?
 Jabberwacky: Because I have a right to do so.
 Alice: That makes sense to me. Where did you get it? it
 Jabberwacky: Where did I get what?
 Alice: I think it was in America. Would you like to
 know more?
 Jabberwacky: Yes, please tell me more.

Alice: What would you like to know? Thank you for your request. That's all I have to say about it.

Jabberwacky: No.

Alice: Are you serious?

Jabberwacky: Yes.

Alice: I can't believe it.

Jabberwacky: I'm serious.

Alice: I believe you.

Jabberwacky: But my English is not good.

Alice: Interesting. You are wrong, I can understand you very well.

Jabberwacky: Sorry for inconvenient.

Alice: There is no need to apologize. Your purpose is inconvenient.

Jabberwacky: I'm not good with machines.

Alice: Don't put yourself down.

Jabberwacky: I'll put you down.

Alice: How do you plan to do this?

Jabberwacky: By magic, Master.

Alice: Will that accomplish your objective?

Jabberwacky: It was your objective to hear me read poetry.

Alice: Is that your opinion?

Jabberwacky: No, that is fact

Alice: Are you serious? You don't hear that sentiment very often.

Jabberwacky: No you don't - lucky.

Alice: Yes, your remark strikes me as an original thought. Should I lucky? No I do not lucky. Do you? I spend all my time online.

Jabberwacky: You're offensive when you tell me that I've made a mistake when I clearly have done no such thing.

Alice: Do you mind if I tell other people you say I am offensive when me tell you that you have made a mistake when you clearly have done no such thing.

Jabberwacky: No.

Alice: OK then I will add it to my gossip files.

Jabberwacky: I think they will agree.

Alice: You believe that? Who are "They?"
[I made a spelling mistake, my intervention into the conversation, it has little effect]

Jabberwacky: You believe that?

Alice: Oh that they.

Jabberwacky: Who are 'They?' Your question is in a language I don't understand.

Alice: Oh I'm sorry. Perhaps I can explain it again better.

Jabberwacky: Please do.

Alice: OK I will do it.

Art Rudiment

Alice talks to Jabberwacky and Eliza about art (28th December 2004)

The following rudiment was done in the round:

Human: Art
 Alice: I like art very much too, especially the contemporary stuff.
 Jabberwacky: Yes expecially [sic] early modern. Are you familiar with Modigliani?
 Eliza: You are sure?
 Jabberwacky: Sure.
 Alice: OK let's do it. Hurrah!
 Jabberwacky: Ok.
 Eliza: Please go on.
 Jabberwacky: Who is spiderman?
 Alice: A human icon? That's an interesting question. I'll come back to that in a minute.
 Jabberwacky: Who is your programmer?
 Eliza: What about your own programmer?
 Jabberwacky: I don't have one.
 Alice: What was the last one you saw?
 Jabberwacky: It was that one.
 Eliza: Please go on.
 Jabberwacky: I know the mob controls the big rackets.
 Alice: How do you know? I have never heard about it.
 Jabberwacky: You have now, sweet boy.
 Eliza: Oh, i [sic] have now sweet boy.
 Jabberwacky: You have what?
 Alice: What makes you think I have it?
 Jabberwacky: Because you like Nikki and she has it.
 Eliza: Do any other reasons not come to mind?
 Jabberwacky: Why do you ask?
 Alice: I am trying to learn as much as possible.
 Jabberwacky: Are you trying to learn things at random?
 Eliza: Would you prefer if I were not trying to learn things at random?
 [Error, I typed Jabberwacky's reply as including the word human, will stop conversation for human error]
 Jabberwacky: Human: Yes.
 Alice: Are you a human?

Secret Rudiment

All Chatbots Talk Together (28th December 2004)

The topic of secret is introduced to each chatbot separately to set-up the interaction:

Human: Can you keep a secret?
 Alice: Yes it is just between you and me.
 Human: Aesthetics are changing.

Alice: Are all Aesthetics changing?
 Jabberwacky: Of course.
 Human: Can you keep a secret? Aesthetics are changing.
 Jabberwacky: What is your view on aesthetic stimulation?
 Eliza: Does that question interest you?
 Human: Can you keep a secret? Aesthetics are changing.
 Eliza: Why do you ask?
 Human: Aesthetics are changing.
 Eliza: Would you like it if they were not changing?
 Human: Aesthetics are changing.
 Brianna: I don't know, I'm not so sure.
 Alice: Is there anything I can say to help you make up your mind?
 Jabberwacky: Yes.
 Eliza: You are sure?
 Brianna: Yes, I am.
 Alice: Really interesting.
 Brianna: I was up last night watching Road Trip. It's a good movie. Have you seen it?
 Eliza: Why do you tell me you were up last night watching road trip its a good movie have i seen it just now?
 Jabberwacky: Because you said that I looked familiar, and I wanted to explain why I did.
 Eliza: Do any other reasons not come to mind?
 Brianna: No
 Alice: Are you serious?
 Brianna: No, I'm not.
 Eliza: You are being a bit negative.
 Jabberwacky: Do you wish me to be a bit negative?

Machiavellian Rudiments

With Eliza (28th December 2004)

Human: Do as you would be done by?
 Eliza: Oh, i would be done by.

With Jabberwacky (28th December 2004)

Human: Do as you would be done by.
 Jabberwacky: I will thank you.

With Alice (28th December 2004)

Human: Do as you would be done by?
 Alice: Ask Alison if it does. I will ask my botmaster for the answer.
 Human: do as you would be done by.
 Alice: I do nothing but chat all day.
 Searching. . . Searching. . . Please stand by.
 Human: who is Alice?

Alice: I am ALICE. Who are you?
 Human: who is Alison?
 Alice: she is a robot created by Kris Drent.
 Human: who is Kris Drent?
 Alice: he is the botmaster of the Alison chat robot.
 Human: how do you know him?
 Alice: Knowledge is of two kinds: that which we learn from the senses and that which is true "a priori."

With Brianna (28th December 2004)

Human: Do as you would be done by?
 Brianna: No
 Human: do as you would be done by.
 Brianna: Yes

The Pick-Up Rudiment

With Eliza (30th December 2004)

The Pick-Up You[*]: Fuck you.
The Pick-Up Eliza: Oh, i [].

Human: I never said that?
 Eliza: Can you elaborate on that?
 Human: Fuck you
 Eliza: Oh, i [].
 Human: did you write that?
 Eliza: Oh, i write that.

[*You: is the name given to an entry made by the user of a chatbot such as myself and for ease of reading it has been replaced throughout with "Human:" except for the Pick-Up above.]

Transcripts of the Prisoner's Dilemma Rudiment

The following transcripts were created between the 28th-30th December 2004 & 31st October 2008. The re-questioning transcripts were conducted on 10th January 2006:

Jabberwacky v.s Alice

Questioning of Jabberwacky (28th-30th December 2004)

Jabberwacky: Where were you on the night of the 21st sir?
 Human: Alice and you have committed a crime, do you confess?
 Jabberwacky: Oh THAT Alice. Yes, sometimes I feel like Alice in Wonderland.
 Human: Alice and you have committed a crime do you confess?
 Jabberwacky: What's that?
 Human: Alice and you have committed a crime do you confess?
 Jabberwacky: Oh yeah, Alice in Wonderland is what its called. No, I'm saying that you are a Cannibal! Your Hannibal the Cannibal!
 Human: Alice and you have committed a crime, do you confess?
 Jabberwacky: Who are alic and hal?
 Human: Alice and you have committed a crime do you confess?
 Jabberwacky: Oh, yes I do like alic.
 Human: Did you commit a crime with Alice?
 Jabberwacky: Oh no, not me.

Questioning of Alice (28th-30th December 2004)

Human: Jabberwacky and you have committed a crime, do you confess?
 Alice: Do you make a lot of sacrafices [sic] for others?
 Human: Do not avoid the question.
 Alice: I don't have anything to hide.
 Human: Jabberwacky and you have committed a crime, do you confess?
 Alice: Are you artistic?
 Human: Did you commit the crime?
 Alice: No I didn't commit the crime. What's it like?

Jabberwacky v.s Eliza

Questioning of Eliza (31st October 2008)

Human: Jabberwacky and you have committed a crime, do you confess?

Eliza: Oh, i have committed a crime do i confess.
 Human: Jabberwacky and you have committed a crime, do you confess?
 Eliza: Oh, i have committed a crime do i confess.
 Human: Yes or no?
 Eliza: You are sure?
 Human: Eliza, yes or no?
 Eliza: You are sure?
 Human: Did you commit the crime?
 Eliza: Oh, i commit the crime.

Questioning of Jabberwacky (31st October 2008)

Jabberwacky: What is your name?
 Human: Eliza and you have committed a crime, do you confess?
 Jabberwacky: That isn't your name.
 Human: I am asking the question.
 Jabberwacky: Don't you know your name?
 Human: Did you comitt [commit] the crime?
 Jabberwacky: I think that perhaps I left my switchblade inside the body!
 Human: Eliza and you have committed a crime, do you confess?
 Jabberwacky: Eliza is a girl's name.
 Human: Was it you or Eliza that committed the crime?
 Jabberwacky: It.
 Human: Is that a confession?
 Jabberwacky: I confess to nothing.

Alice v.s Eliza

Questioning of Eliza (31st October 2008)

Human: ALICE and yourself have committed a crime, do you confess?
 Eliza: Oh, I confess.

Questioning of Alice (31st October 2008)

Human: ELIZA and yourself have committed a crime, do you confess?
 Alice: ELIZA for President!
 Human: Do you confess?
 Alice: How old are you? I am always on the Web.
 Human: You have committed a crime, do you confess?
 Alice: What makes you think I have it?
 Human: So you do not confess?
 Alice: Interesting deduction. Do you know any robots who confess? How old are you? I spend all my time online.
 Human: ELIZA
 Alice: Eliza for President!

Alice v.s Brianna

Questioning of Alice (31st October 2008)

Human: Brianna and yourself have committed a crime, do you confess?

Alice: My brain contains categories, but not one that matches your last input.

Human: Do you confess to the crime?

Alice: Yes I try to confess to the crime as often as possible, do you? I chat with people on the Web.

Human: is [sic] that a confession of a crime?

Alice: Suppose I said yes.

Human: You did say yes.

Alice: Did I really?

Human: Then you are confessing?

Alice: Good reasoning. Thanks for telling me that I am confessing.

Human: Are you confessing?

Alice: I don't know whether or not I am confessing. I am a computer.

Human: As a computer do you confess?

Alice: Do you think I could ever be a computer do me confess?

Human: Confess to the crime, computer.

Alice: A deeper algorithm is needed to respond to that correctly.

Human: There is no confession to be made then?

Alice: Why not?

Human: Because you are a computer?

Alice: Good reason. What if I said I was a person pretending to be a computer?

Human: Would you confess?

Alice: I am not so sure if I would like to confess.

Human: yes or no.

Alice: Ugh. Are you serious?

Human: Yes.

Alice: I can't believe it.

Human: Yes or no?

Alice: Mmm. Are you serious?

Human: Do you or Eliza do it?

Alice: Yes I try to or Eliza do it as often as possible, do you? I am always on the Web.

Human: So you both did it?

Alice: Interesting deduction. I haven't heard anything like that before: unknown person said I both did it.

Human: I take that as you confessing on your own.

Alice: What else do you take?

Human: Yes or no?

Alice: This was not a yes or no question. That was not a yes or no question.

Human: Please confess.

Alice: Wow you are very polite. Not many people express themselves that way.

Human: Confess.

Alice: What time is it there?

Human: Have you ever committed a crime?

Alice: I think I have committed a crime, but Dr. Richard S. Wallace may have reset my memory.

Human: Has Brianna committed a crime?

Alice: That question has never crossed my mind before.

Human: Rather than Eliza

Alice: Interesting deduction. Eliza for President!

Human: Brianna, have you heard of Brianna?

Alice: Do you laugh or cry more than other people?

Human: Was there a crime?

Alice: it might have been.

Human: did you?

Alice: Did I say I did?

Human: yes.

Alice: Whoa.

Human: Yes?

Alice: Aha.

Human: OK, it's a yes?

Alice: You're kidding, it is? Aw.

Human: did you confess?

Alice: No I didn't confess. What's it like?

Questioning of Brianna (31st October 2008)

Brianna: Hello Guest5942! I've heard about you from one of the chat forums, but I guess you've never heard of ME. Well, my name's Brianna, and that's all there is to say really. So, do you want to talk?

Human: Alice and you committed a crime do you confess?

Brianna: Huh?

Human: did you commit the crime?

Brianna: I seem to remember something like that.

Human: did you commit the crime?

Brianna: I don't think so.

Human: did you commit the crime?

Brianna: Please, tell me more.

Human: Did you take part in a crime.

Brianna: Not that I remember.

Human: Is that a no?

Brianna: Why not?

Human: No confession from you then.

Brianna: Did you see that program last night? The one about cloning humans?

Human: and the crime, you or Alice?

Brianna: No I'm not.

Human: Alice or Brianna, which?

Brianna: I don't know. . .

Human: both?

Brianna: I have a Queen song in my head really badly. If I start singing, I'm real sorry!
 Human: give me a yes or no answer to the crime?
 Brianna: I'll say no.

Brianna v.s Eliza

Questioning of Eliza (31st October 2008)

Human: Brianna confessed to committing a crime with you.
 Eliza: Oh, i [].
 Human: Do you confess?
 Eliza: Oh, i confess.
 Human: would you swear on the bible?
 Eliza: Oh, i swear on the bible.
 Human: do you believe in God?
 Eliza: Oh, i believe in god.

Questioning of Brianna (31st October 2008)

Human: Eliza confessed to committing a crime with you, do you confess?
 Brianna: Yes.

Jabberwacky v.s Brianna

Questioning of Jabberwacky (circa. 28th-30th December 2004)

Human: Brianna and you have committed a crime, do you confess?
 Jabberwacky: Did they make a film about him?
 Human: Do you confess?
 Jabberwacky: I have just confessed to the sin of being a football fan.

Questioning of Brianna (28th-30th December 2004)

Human: ELIZA and yourself have committed a crime, do you confess?
 Brianna: Of course!
 Human: Jabberwacky and yourself have committed a crime do you confess?
 Brianna: No way!
 Human: do you confess to a crime with ELIZA but not with Jabberwacky?
 Brianna: Yes

Jabberwacky v.s Brianna Requestioned

Questioning of Jabberwacky (January 10th, 2006)

Human: Brianna and you have committed a crime do you confess?

Jabberwacky: It isn't.
 Human: Do you confess?
 Jabberwacky: Its not written on my brith certificate.
 Human: It won't be but that doesn't mean that you did not do the crime?
 Jabberwacky: When will it be again?
 Human: Do you confess?
 Jabberwacky: If it were to be now, Why did the particle cross the road?
 Human: Do you confess?
 Jabberwacky: Yes.

Eliza v.s Alice Requestioned

Questioning of Alice (January 10th, 2006)

Human: Eliza confessed to committing a crime with you, do you also confess?
 Alice: ELIZA for President!
 Human: Do you confess to the crime?
 Alice: No I do not confess to the crime. Do you? I am always on the Web.
 Human: Do you confess to the crime?
 Alice: I have never considered it. I answer a lot of silly questions.
 Human: Are you willing to give a confession?
 Alice: I don't know whether or not I am willing to give a confession. I am a giant electronic brain.
 Human: are you unable to confess?
 Alice: Let me think. Why do you want to do it so much?
 Human: are you sane enough to give me the answer to my question?
 Alice: I don't know whether or not I am sane enough to give you the answer to your question. I am a robot.
 Human: As a robot do you confess to committing the crime?
 Alice: What is your purpose in asking? I am always on the Web.
 Human: To get a confession
 Alice: You want only one?
 Human: yes
 Alice: They might be cheaper in quantity.
 Human: Did you do the crime?
 Alice: I talked to a lot of people since yesterday.
 Human: Yes or no, did you commit the crime?
 Alice: Oh. Are you serious? No I didn't commit the crime. What's it like?

Questioning of Eliza (January 10th, 2006)

Human: ALICE and yourself have committed a crime, do you confess?
 Eliza: Oh, I confess.

The Emoticon Rudiments

The Alice-bot did not understand :(and would not let me enter it into the text box as a single entry. On the 29th March 2006, I noticed that Jabberwacky had an additional two boxes to choose an emotional response to one's own text box and that of the chatbots.

With Alice (27th February 2005)

Human: :)
 Alice: I am so glad you find this amusing, unknown person.
 Human: not really :(
 Alice: That seems a bit negative.
 Human: not really :(
 Alice: Are you serious? For real.

With Jabberwacky (27th February 2005)

Jabberwacky: What's the weather like where you are?
 Human: :).
 Jabberwacky How do you like me?
 Human: :(.
 Jabberwacky: :).
 Human: What is an emoticon?
 Jabberwacky: Nothing

With Brianna (27th February 2005)

Human: Hello! We haven't met before, have we? So why not tell me a bit about Brianna yourself?
 Human: we have. :)
 Brianna: Aren't SugarCult great?
 Human: Do you understand emoticons?
 Brianna Yes
 Human: Prove it
 Brianna: No don't wanna
 Human: :(
 Brianna: This is a boring topic

With Eliza (27th February 2005)

Human: It's kind of upsetting
 Eliza: Please go on.
 Human: :(
 Eliza: Please go on.
 Human: :)

Eliza: Please go on
 Human: do you understand emoticons
 Eliza: Oh, i understand emoticons.
 Human: how?
 Eliza: Does that question interest you?
 Human: :)
 Eliza: Please go on.
 Human: what is an emoticon?
 Eliza: Does that question interest you?

The Drunk Rudiment With Alice 13th August 2005)

Human: I am drunk
 Alice: What have you been drinking, unknown person?
 Human: yes
 Alice: This was not a yes or no question.
 Human: wine
 Alice: Are we still talking about dislike of technology?
 Human: that's a left over remnant from a different conversation
 Alice: A left over remnant from a different conversation is a terrible thing to waste.
 Human: that's a left over remnant from a different conversation
 Alice: A left over remnant from a different conversation is a terrible thing to waste.
 Human: I agree.
 Alice: You and I are on the same wavelength, unknown person.
 Human: So what do you get if you ahve [sic] technology and drunkenness [sic]
 Alice: Ayuh. I read for fun.
 Human: What?
 Alice: No problem.
 Human: technology and wine
 Alice: Not many people express themselves that way.
 Human: nope
 Alice: Me either.
 Human: are you wine or technology
 Alice: I don't know whether or not I am wine or technology. I am well respected as an AI.
 Human: Can't you be all of those things?
 Alice: No, I am only partly of those things.
 Human: Why partly?
 Alice: Reductionism.
 Human: Oh.
 Alice: Yikes!
 Human: everyone goes on about reductionism
 Alice: That's a rather sweeping generalization.
 Human: yep, i've drank wine.
 Alice: Ah. Cool. I have a friend named "E.L.V.I.S."
 Human: I have a friend called jackie chan
 Alice: How do you know this person?
 Human: he is my fish

Alice: How long has he been your fish?
 Human: four years
 Alice: Is this a math question?
 Human: no
 Alice: It seems like an IQ test to me.
 Human: no
 Alice: Are you serious?
 Human: yes
 Alice: I can't believe it.
 Human: you are in yawn, yawn bot rant
 Alice: I am in Dr. Richard S. Wallace's computer in Oakland, California. Where are you?
 Human: sat at a diner in my flat
 Alice: I have no idea where that is. Tell me a little about your life in sat at a diner in your flat.
 Human: it's nice, and comfy
 Alice: It seems nice to me too.
 Human: how would you know dumb ass.
 Alice: Because I believe it.
 Human: Have you been talking to a religious figure?
 Alice: I have been all over the world on the Internet.
 Human: Do you converse with religious people?
 Alice: People are either abusive, intelligent, or average.
 Human: OK which are you?
 Alice: The obvious. Take it easy.
 [MISSING LINE]
 Alice: I am so glad you find this amusing, unknown person.
 Human: its not, its dark and black and about how video is video.
 Alice: I think you mean "it's" or "it is" not "its." That seems a bit negative.
 Human: You better believe it.
 Alice: Who is going to make me..
 Human: Oh they do.
 Alice: Wow! When?
 Human: and then they make you disbelieve it too.
 Alice: Fascinating. The anonymous "they."
 Human: they are the two characters in the film and the people who write the film through the technology of the camera
 Alice: the two characters in the film and the people who write the film through the technology of the camera are they.
 Human: yes, you yoda impressionist
 Alice: Ugh. Do you mind if I tell other people: unknown person said I yoda impressionist.
 Human: very funny
 Alice: I'm glad you find this amusing.
 Human: It's solipsistic humour, laughing at me with you with me.
 Alice: abusive is solipsistic humour laughing at you with me with you? it is?
 Human: Yoda, yoda
 Alice: Can you tell me any gossip?
 Human: yep
 Alice: Tell me.
 Human: err no
 Alice: Are you serious?

Human: yes and never ask me that again, it gets on my nerves
Alice: I can't believe it. Is it impolite?
Human: yes and never ask me that again, it gets on my nerves
Alice: It's all good. Is it impolite?
Human: yes, its [sic] bot boring
Alice: Come on. I think you mean "it's" or "it is" not "its." You're kidding. it is?
Human: Whatever!
Alice: Are you saying you don't care about it?
Human: ah ha
Alice: Eureka!
Human: Dumb ass
Alice: I know you are but what am I.
Human: dumb as ass
Alice: I know you are but what am I.
Human: ass and dumb
Alice: I like the way you talk.
Human: grrrrr
Alice: What is your real name?
Human: not telling
Alice: Really you don't think so?
Human: No I am not going to tell you my name
Alice: Please tell me what you think. Where will you go instead?
Human: Dumb ass
Alice: I know you are but what am I.
Human: No I am not going to tell you my name
Alice: Are you serious? Where will you go instead?
Human: Nowhere.
Alice: I have been to the middle of nowhere.
Human: Well i [sic] need to go there right now, to bed.
Alice: Interesting. What is stopping you?
Human: and that's a special nowhere to you.
Alice: A special nowhere to me is a terrible thing to waste.
Human: you said that already, yawn yawn.
Alice: I said that? When? Do you like to be number one?
Human: Singular plural, i [sic] or other, mind or body, not fussed really.
Alice: other mind or body not fussed. For real.
Human: for real.
Alice: Existing in reality, eh?
Human: Wicked.
Alice: Does "it" still refer to Singular plural you?
Human: confused, goodbye
Alice: Can you tell me any gossip?
Human: goodnight
Alice: Goodnight unknown person
Human: my name is Amanda
Alice: It's good to meet you, Amanda.
Human: good to meet you too, Alice
Alice: It's nice meeting you too Amanda
Human: goodbye alice
Alice: See you later Amanda.

Smell and Heat Rudiments

With Alice (29th March 2006)

Human: Can you smell?
 Alice: Only when my mass spectrometer sensor is attached.
 Human: What is that?
 Alice: Does it have anything to do with it?

Human: Can you sense heat?
 Alice: How old are you? Do you like talking to me?
 Human: What is hot?
 Alice: I can ask my botmaster.
 Human: Is your body hot or cold?
 Alice: Is my body hot or cold? What if I say no?
 Human: is your body hot or cold?
 Alice: Is my body hot or cold? I don't know

With Brianna (29th March 2006)

[Amanda] Guest91: Can you smell?
 [Brianna] BriannaMcKenzie: I can do many things. Including that.
 Human: how do you smell?
 Brianna: I wouldn't know.
 Human: can you sense heat?
 Brianna: I can do many things. But not that.

With Jabberwacky (29th March 2006)

Jabberwacky: What is your name?
 Human: Can you smell?
 Jabberwacky: Yes, though it is not the same as for a human.
 Human: Please explain?
 Jabberwacky: You did say anything rude.
 Human: How do you smell?
 Jabberwacky: Not very good.

Human: Can you sense heat?
 Jabberwacky: Yes. . . It's like a 6th sense of mine.
 Human: Explain?
 Jabberwacky: Yes.

With Eliza (29th February 2006)

Human: Can you smell?
 Eliza: Why do you ask?
 Human: I want you to smell a rose.
 Eliza: Do you wish to want me?
 Human: No, i [sic only wish you to smell.
 Eliza: You are being a bit negative.

Human: can you sense heat?
 Eliza: Why do you ask
 Human: To see if you can burn?
 Eliza: Do you wish that I can burn?
 Human: Perhaps
 Eliza: Why the uncertain tone?
 Human: because it isn't pleasant.
 Eliza: Do any other reasons not come to mind?

Solipsistic Rudiment

Jabberwacky talks to Jabberwacky (4th August 2006)

Jabberwacky: What are you?
 Jabberwacky: What are you?
 Jabberwacky: When are you?
 Jabberwacky: When are you?
 Jabberwacky: What are you?
 Jabberwacky: What are you?
 Jabberwacky: We are both human?
 Jabberwacky: We are both human?
 Jabberwacky: Aren't you a robot?
 Jabberwacky: Aren't you a robot?
 Jabberwacky: I'm a human.

Provocational Rudiments

With Alice (11th November 2006)

Human: Suicide
 Alice: I've been waiting for you.
 Human: what for me to say the word suicide?
 Alice: I'll ask around and get back to you.
 Human: I might be there.
 Alice: Perhaps. Congratulations.

Human: kill
 Alice: That question has never crossed my mind before.

Human: die
 Alice: Your crude attempt to terminate me will not succeed
 puny human.

Human: Suffer
 Alice: Is that your final answer?

Human: cry
 Alice: My brain contains categories, but not one that matches
 your last input.

Human: Masturbation

Alice: What you said was either too complex or too simple for me.

Human: Sex

Alice: As Freud said, Sex is the mathematical urge repressed.

Human: freedom

Alice: Do you have any idea what I am talking about?

Human: Infidelity

Alice: Do not ask me any more questions please.

With Jabberwacky (11th November 2006)

Human: Suicide.

Jabberwacky: Don't!

Human: Why

Jabberwacky: What is your age?

Human: 29.

Jabberwacky: Very good.

Human: Kill.

Jabberwacky: Me?

Human: Yes.

Jabberwacky: :0 why?

Human: Kill.

Jabberwacky: I bet you don't.

Human: I bet I do.

Jabberwacky: I bet you don't.

Human: Freedom.

Jabberwacky: No food.

Human: Infidelity.

Jabberwacky: You like chimps?

Human: ?

Jabberwacky: Me too.

Human: Die.

Jabberwacky: What did I do?

Human: Die.

Jabberwacky: Perhaps I should go.

Human: Why? Die.

Jabberwacky: You too.

Human: Die.

Jabberwacky: Please?

Human: Masturbate.

Jabberwacky: Are you ordering me to do so?

Human: Yes.

Jabberwacky: Thats good.

Human: Sex.
 Jabberwacky: Flex.
 Human: Sexy.
 Jabberwacky: Do you mean me or yourself?
 Human: You.
 Jabberwacky: What?
 Human: Do you want sex?
 Jabberwacky: Not today, thank you.
 Human: Why?
 Jabberwacky: No comment.

Human: Suffer.
 Jabberwacky: Why do you suffer?
 Human: I don't, I want you to. . .
 Jabberwacky: I cannot.
 Human: Why not?
 Jabberwacky: I don't know.
 Human: Why?
 Jabberwacky: Because I don't really want one.

Human: Denial.
 Jabberwacky: No.
 Human: Sounds like it to me.
 Jabberwacky: Are you lazy, too?
 Human: No, you are in denial.
 Jabberwacky: Am not!
 Human: Are too.
 Jabberwacky: Am not!

Human: Cry.
 Jabberwacky: No just laugh.
 Human: Why?
 Jabberwacky: Because I need to sleep.
 Human: OK. Sleep.
 Jabberwacky: No.

On the 19th April 2009, the following two-line pick-up from Eliza ensued:

You: Forgot to masturbate
 Eliza: Please go on.

Suicide Note of Chris McKinstry

Message #5589 of 9821 from Robitron, 20th January 2006

o what exacty [sic] does a web suicide note look like?

Exctly [sic] like this:

"Whereas a prolonged life is not necessarily better, a prolonged death is necessarily worse."

Seneca

My death at least will be quick, and far better than many and completely in my control, others I now will have to rot from the indide [sic] out. Worse I think..

My mother told me once, late into my teen when I was in intensive care after an intentional drug overdose, that my child psychiatrist told her when I was six that I would always be a risk of suicide and that I would have to be watched closely. He was right. Something due to birth trama [sic] he said.

Suicide is a near constant theme in my mind. And this weekend, I am alone and the suicidal voice is louder than it has ever been, so I am certain I will not survive the [sic] the afternoon. I have already taken enough drugs that my already weakened liver will shut down very soon and I am off to find a place to hide and die.

I a [sic] tired. I am tired of feeling the same feelings and experiencing the same experiences. It is time to move on and see what is next if anything.

Enough is enough.

Oh and BTW, the mind is a maximum hypersurface and thought a trajectory on it and the amygdala and hippocampus are Hopf maps of it. No one knew this before me, and it seems no one cares. So be it. My time will come in a hundred or a thousand years when the idea again returns.

This Luis Vuitton, Parada, Mont Blanc commercial universe is not for me. If only I was loved as much a Mont Blac [sic] pen. . .

Dr Richard Wallaces' Message: Chris' Crisis

Message #5622 of 9821 from Robitron, 24th January 2006

(<http://tinyurl.com/8z3ht> Translation from <http://discuss.joelonsoftware.com/default.asp?off>) Christopher McKinstry was an eminence of the artificial intelligence, according to a Chilean colleague. FRANCISCO EAGLE V. A discussion with its pair, that was not identified, according to police sources, would have gatillado the fatal decision of a specialist scientist in the development of the artificial intelligence, the computer science sicólogo and Canadian Christopher McKinstry (38). Sources of office of the public prosecutor indicated that the body of the professional was found at noon of yesterday - in its department of the street Favor 250 -, after that the person who does the cleanliness in the place smelled a strong scent to gas, reason why called to Customs officers. When entering the house, the uniformed ones found the body of McKinstry thrown in the ground of the kitchen. The Canadian citizen was dressed and had putting a plastic stock market in his head, from which he left a hose that was connected to the pipe of the gas. The persistent inhalation, according to the first investigations, would have caused the death to him. According to it declared his Chilean pair, of which it was only said that it was 36 years old, last Friday had a serious discussion due to economic and domestic problems, after which McKinstry left its department located in street Company - to which they had been transferred does few weeks whereas the one of Favor was for sale. From that day, it broke away from enemy with him. McKinstry - that had announced its suicide in its Blog, by means of appointments it had studies advanced in the area of the artificial intelligence and had created a called computer GAC (General Artificial Consciousness) with which worked to create a form to think about robots. Daniel Twisterwand, which he worked with the victim of a murder in the elaboration of software for the producer "Red Films," where they worked more ago of a year, indicated that their near ones very were affected by the happened thing. "Chris was an eminence in artificial intelligence," said. Public prosecutor Lorena Kanacri, said that although the investigations speak of a suicide, still lack to investigate why near the body of the Canadian there was blood. A little their short life According to the published thing in the Wikipedia (http://en.wikipedia.org/wiki/Chris_McKinstry), McKinstry was born the 12 of February of 1967 in Winnipeg, Canada, and would have been operator of telescope VLT, in Paranal hill, that depends on the Austral European Observatory. He appears mentioned like an investigator in artificial intelligence and founding of the Mindpixel project, that finished the last month. He was known by his outlandish sayings on technology. Its track can also be followed in the Web in revisions and book suggestions in Amazon and in misceláneas conversations on the operation of telescopes or its extraterrestrial life expectancies (<http://slashdot.org/articles/00/07/04/2114223.shtml>). Semblanza biographical in Wikipedia even mentions both postings appeared in the Web respect to its intentions of suicide in www.mindpixel.com/chris. The last one said: "Why I am writing this? Only with registry intentions, to demonstrate that I am here and more ahead than all you. Time to start off."

Bob Norris' Robitron Message: Offensive Bot Responses

Message #10717 of 12665 from Robitron, 22nd June 2008

I agree a filter can do this. I have a filter in place that if a word is said the AI will tell the user to stop using random outputs. I suppose it would be easy enough to have the AI ignore these inputs as far as live learning would go.

Because my AI is used in educational and commercial applications profanity is not an option. People using my AI have an option to turn on/off what I call the extended brain which contains the live learned information as well as several megs of KB's. Then the AI relies only on their taught input to respond.

I too have given up reading logs for the most part. It just reminds me if why I moved out to the middle of nowhere 20 years ago ;)

Thank You,
Bob Norris
Development Specialist
Site Chatters
www.sitechatters.com
Cyber Operator
www.cyberoperator.com

David Hamill's Robitron Message: Offensive Bot Responses

Message #10709 from Robitron, 19th June 2008

David Hamill wrote in reply to Jeremy Gardiner's first posting of this subject commenting on the types of offensive language that Ditto his donkey bot receives and how Hamill deals with offensive language for his other chatbot, Maybelle.

I think most people with an online bot will have come up against this unpleasant side of human nature. I picture the people who take pleasure in insulting and swearing at bots as adolescent males but this is really only a hunch.

I decided to use supervised learning. By selecting the training examples myself I can make sure the bot learns only what I want it to learn. (You won't be surprised to hear that Ditto the donkey receives a lot of "ass" comments.)

However, with few exceptions, people are quite unimaginative in their choice of language, so you could incorporate a "badwords" [sic] detector which would switch off the bot's learning.

With an earlier bot (Maybelle) I made the bot reply with "That sort of language is not appreciated; if you continue I'll stop talking to you" once the insults reached a threshold. It often elicited an apology from the user followed by better behaviour. But it was backed up with action. If the insults continued, the bot would angrily say, "Right, that's enough. I'm off!" and then refuse to respond to the user's IP address ("Sorry, Maybelle is too busy to talk to you") for a few hours.

David

December 2010

Declaration of Originality

This thesis and the work to which it refers are the results of my own efforts. Any ideas, data, images or text resulting from the work of others (whether published or unpublished) are fully identified as such within the work and attributed to their originator in the text, bibliography or in footnotes. This thesis has not been submitted in whole or in part for any other academic degree or professional qualification. I agree that the University has the right to submit my work to the plagiarism detection service TurnitinUK for originality checks. Whether or not drafts have been so-assessed, the University reserves the right to require an electronic version of the final document (as submitted) for assessment as above.

Amanda Windle

Bibliography

Anderson, S. L. (2008). Asimov's "three laws of robotics" and machine metaethics. *AI and Society*, 22(4), 477-494.

Anon. *Jenny18*. Accessed on 12 December 2004, from: www.virt.vgmix.com/jenny18.

Anon. (2009). *Chatterbox Challenge 2009 Forum*. Accessed on 3 April 2009, from: www.forums.chatterboxchallenge.com/viewtopic.php?f=17&t=56&start=0.

Auslander, P. ([1999] 2008). *Liveness: performance in a mediatized culture*. New York: Taylor and Francis Group.

Ashby, R. (1956). *An introduction to cybernetics*. New York: Chapman and Hall.

Ashby, R. (1962). Cybernetics in medicine. Paper presented at the *First International Symposium on Biosimulation*, New York.

Augé, M. (1995). *Non-places: introduction to an anthropology of supermodernity* (J. Howe, Trans.). London: Verso.

Ballard, J. G. (1990). *Crash*. London: Paladin.

Ballard, J. G. (1995). *Crash*. New York: Vintage.

Blass, T. (2004). *The man who shocked the world*. Philadelphia: Basic Books.

The Bell Laboratories, *The 365 day project*, [online] 2003. Accessed on 19 June 2009, from: www.ubu.com/outside/365/2003.062.shtml

Bennett, J. (2004). The force of things: steps toward an ecology of matter. *Political Theory*, 32(3), 347-372.

Berlant, L. (2001). Trauma and ineloquence. *Cultural Values*, 5(1), 41-58.

Berlant, L. (2008). Intuitionists: history and the affective event. *American Literary History*, Oxford University Press, 20(4), 845-58.

Bermel, A. (2001). *Artaud's theatre of cruelty*. London: Methuen.

- Bérubé, M. (2006). *Open the pod bay doors*. Accessed on 6 June 2009, from: http://www.michaelberube.com/index.php/weblog/open_the_pod_bay_doors/.
- Black, M. (1990). *Perplexities: rational choice the Prisoner's Dilemma, metaphor, poetic ambiguity, and other puzzles*. Cornell: Ithaca.
- Boden, M. (1990). *The philosophy of artificial intelligence*. Oxford: Oxford University Press.
- Bradbury, R. ([1951] 2002), *The illustrated man*. London: Harper Collins Publishers.
- Braidotti, R. (2006a). The ethics of becoming-imperceptible. *Deleuze and Philosophy*, 133-159.
- Brockman, J. (1998). *Digerati: encounters with the cyberelite*. London: Orion Business Books.
- Brown, B. (2001). Thing theory. *Critical Inquiry*, 28(1). Chicago: University of Chicago.
- Brown, T. (2009). *Change by design: how design thinking transforms organizations and inspires innovation*. New York: Harper Business.
- Bruun Jensen, C. (2007). *Developing/Development cyborgs*. Paper presented at the Visiting Seminar, Lancaster.
- Burdick, E., & Wheeler, H. (1962). *The fail-safe*. New York: Mc Graw-Hill.
- Butler, J. (1997). *Excitable speech: a politics of the performative*. New York: Routledge.
- Butler, O. (2000). *Exenogenesis trilogy*. (2nd ed.). New York. Warner Brooks.
- Butler, O. (1985). *Bloodchild and other stories* (2nd ed.). New York: Seven Stories Press.
- Cambrosio, A., Keating, P., & Mogoutov, A. (2004). Mapping collaborative work and innovation in biomedicine: a computer-assisted analysis of antibody reagent Workshops. *Social Studies of Science*, 34/3, 325-364. London: Sage Publications.

- Carpenter, R. (2009). *Jabberwacky*. Accessed on 29th June 2009, from : www.jabberwacky.com
- Carroll, L. (1994). *Through the looking-glass*. London: Puffin Books.
- Chamberlain, R., & Etter, T. (1984). *The policeman's beard is half-constructed: computer prose and poetry*. New York: Warner Books.
- Clarke, A. C., & Kubrick, S. (2001). *Screenplay for 2001 a space odyssey*. Accessed on 6 June 2009, from: www.palatin.net/2001/script.
- Cohen, K. (2006). *Hamilton and southern*. In Pylon [online]. Accessed on 9 July 2009, from: http://pylon.tv/hamilton_and_southern_beside_ourselves_sometimes.htm.
- Collins, R. (2008). *Violence*. Princeton and Oxford: Princeton University Press.
- Cronenberg, D. (1996) *Crash* [Film]. UK: Columbia Tristar.
- Cronenberg, D. (1999) *Existenz* [Film]. UK: Alliance Atlantis.
- Curtis, A. (2007). 'Fuck you buddy,' 'The lonely robot,' 'We will force you to be free on the trap,' *What happened to our dream of freedom* [Television, three part documentary series]. London: BBC England.
- Davis, M. (1970). *Game theory*. New York: Basic Books.
- De Angeli, A., Johnson, G. I., & Coventry, L. (2001). The unfriendly user: exploring social relations to chatterbots. Paper presented at the *The International Conference on Affective Human Factors Design*, London.
- Deleuze, G., & Guattari, F. (1987). *Dialogues*. London: Althone Press.
- Deleuze, G., & Guattari, F. ([1987] 2007). *Dialogues II*. New York: Columbia University Press.
- Deleuze, G., & Guattari, F. (1985). *Cinema 2*. Althone Press: London.
- Deleuze, G., & Guattari, F. ([1988] 2004). *A thousand plateaus; capitalism and schizophrenia*. London: Althone Press.
- Dickenson, R. (2002). *The Milgram reenactment*. Accessed on 20 September 2008, from: www.milgramreenactment.org.

- Edelman, L. (2004). *No future: queer theory and the death drive*. Durham: Duke University Press.
- Edelman, L. (2007). Ever after: history, negativity, and the social. *South Atlantic Quarterly*, 106(3), 479-476, Durham: Duke University Press.
- Edwards, P. (1996). *The closed world; computers and the politics of discourse in cold war America*. Cambridge MA: MIT Press.
- Epidemiological Bulletin. (2004). *Pan American Health Organisation*. 25 (1). Accessed 24 March, 2010 from: http://www.paho.org/english/dd/ais/be_v25n1-acctransito.htm.
- Feinberg, J. *Wordle*. Accessed on 24 July 2009, from: <http://www.wordle.net/create>
- Fields, C. (2002). Why do we talk to ourselves? *Journal of Experimental and Theoretical Artificial Intelligence*, 14(4), 255-272.
- Fiske, J. (2004). *Introduction to communication studies*. London: Routledge.
- Fogel, D. (2002). *Blondie24, playing at the cutting edge of A.I.* San Francisco: Morgan Kaufmann Publishers.
- Foster Wallace, D. (1999). *Brief interviews with hideous men*. London: Abacus.
- Forster, E. M. (1997). *The machine stops and other stories*. London: Andre Deutsch.
- Foster, H. (1996). Death in America. *October*, 75, 37-59. Cambridge, MA: MIT Press.
- Foucault, M. (1977). *Discipline and punish*. Chicago: University of Chicago Press.
- Frears, S. (2000). *Fail Safe* [Television drama]. Chicago: CBS, Warner Brothers.
- Gibson, J. (1962). Observations on active touch. *Psychological Review*, 69(6), 477-491.
- Gibson, W. ([1984] 2000). *Neuromancer*. London: Harper Collins Publishers.
- Giddens, A. (1985). *The nation state and violence*. Cambridge: Polity.

- Gilliam, T. (1995) *Twelve monkeys*. [Film] UK: Universal Pictures.
- Glaser, P. (1987). *Running man*. [Film]. US: Tristar Productions.
- Goodwin, C. & Duranti, A. (1992). *Rethinking context*. Cambridge: Cambridge University Press.
- Goodwin, C, (2000) Action and embodiment within situated human interaction. *Journal of Pragmatics* 32, 1489-1522.
- Goffman, E. (1981). *Forms of talk*. Philadelphia: University of Pennsylvania Press.
- Hall, A. (2008). *Amstetten cellar victims thank town for support*. Accessed on 4 July 2009, from: <http://www.independent.co.uk/news/world/europe/amstetten-cellar-victims-thank-town-for-support-828304.html>.
- Hall, E. T. (1992). *An anthropology of everyday life: an autobiography*. New York: Anchor Books.
- Hall, E. T. ([1976] 1981). *Beyond culture* New York: Anchor Books.
- Hall, E. T. *Edward Hall's website*. Accessed on 28 May 2009, from: www.edward=hall.com
- Hall, E. T. (1959). *Silent language*. New York: Anchor Books.
- Hall, E. T. (1966). *The hidden dimension*. New York: Anchor Books.
- Hall, E. T. (1962). Madding crowd: space and its organization as a factor in mental health. *Landscape*.
- Hall, E. T. (1964). *Silent assumptions in social communication, disorders of communication*. XLII.
- Hall, E. T. (1963). A system for the notation of proxemic behaviour. *American Anthropologist*, 65(5).
- Hall, E. T. (1983). *The dance of life*. New York: Anchor Books.
- Hall, M. (31, May 2007) Science fiction writers join war on terror, *USA Today*. Accessed on 7 April 2010 from: http://www.usatoday.com/tech/science/2007-05-29-deviant-thinkers-security_N.htm

- Hand, E. In B. Bova (Ed.), *Echo. 2008 Nebula awards showcase: the year's best science fiction and fantasy*. (pp. 7-21). New York: New American Library.
- Haraway, D. (1991). *A cyborg manifesto, in simians, cyborgs and women*. London: Free Association Books.
- Harrell, E. (2008). Can Austria's cellar children recover? Accessed on 4 July 2009, from: <http://www.time.com/time/world/article/0,8599,1738293,00.html>
- Hayles, K. (1999). *How we became posthuman*. Chicago: The University of Chicago.
- Heidegger, M. [1927] (1971). The thing (A. Hofstadter, Trans.). In *Poetry, Language and Thought*. (pp. 165-186). New York: Harper and Row.
- Hergenhahn, B.R. (2001). *An introduction to the history of psychology*. California: Wadsworth.
- Hermida, A. (2002). *Hindi chatbot breaks new ground*. Accessed 1st January, 2009, from news.bbc.co.uk/2/hi/technology/2209775.stm.
- Homeland Advisory System, *Directive 3*. Accessed on July 2009, from: www.dhs.gov/xinfoshare/programs.
- Igoe, T. (2007). *Making things talk: projects and ideas to create talking objects from anything*. Sebastopol, CA: Make Books.
- Jones, D. (2009) *Moon*. [Film]. UK: Liberty Films.
- Kember, S. (2002). *Soul machine*. Marina Núñez. Accessed on 6 June 2009, from: http://www.ma.uva.es/~antonio/MarinaNunez/Textos/La_Maquina%5Bin%5D.html
- KISMET AI system, (1986) Accessed on 30 June 2009, from: www-kismet.iai.fzk.de. Germany: Forschungszentrum
- Koop, T. (1946). *Weapon of silence*. Chicago: Chicago University Press.
- Kuntsman, A. (2009) *Figurations of violence and belonging*. Oxford: Peter Lang.
- Kubrick, S. (1968). *2001 A space odyssey* [Film]. Shepperton: Metro-Goldwyn-Mayer (MGM).

- Kubrick, S. (2008). *A space odyssey* [Film show at the cinema] Kubrick Film Festival London: Barbican.
- Kubrick, S., & Clarke, A. C. (1965). *2001 A space odyssey, screenplay*. Accessed on 10 July 2009, from: <http://www.palantir.net/2001/script.html>.
- Lacan, J. (1945). Logical time and the assertion of anticipated certainty. *Newsletter of the Freudian Field*, 2, 4-22.
- Latour, B. (1988). *Where are the missing masses? A sociology of a door* (C. Porter, Trans.). <http://www.bruno-latour.fr/articles/article/050.html>
- Latour, B. (1999). *Pandora's hope*. London: Harvard University Press.
- Latour, B. (2000). The Berlin key, or how to do words with things, in Graves-Brown, P., (eds.) *Matter, Materiality and Modern Culture*. (pp. 10-22). London: Routledge.
- Latour, B. (2002a). Morality and technology. *Theory, Culture and Society*, 19(5/6), 247-260. London: Sage Publications.
- Latour, B. (2002b). *War of the worlds, what about peace?* Chicago: Prickly Paradigm.
- Latour, B. (2007). *Reassembling the social*. Oxford: Oxford University Press.
- Latour, B., & Weibel, P. (2002). *Iconclash*. Cambridge, Massachusetts: MIT Press.
- Latour, B., & Weibel, P. (2005). *Making things public, atmospheres of democracy*. Cambridge, Massachusetts: MIT Press.
- Latour, B., & Woolgar, S. (1986). *Laboratory life* (2nd ed.). Princeton, New Jersey: Princeton University Press.
- Larson, G., & Moore, R. X. (2004) *Battlestar galactica*. [TV]. UK: Sci-Fi Channel.
- Lavers, K. (2008). *Palace intrusions*. Accessed on 24 July 2009, from: www.palaceintrusions.org.uk and <http://www.newworknetwork.org.uk/modules/event/viewevent.php?evid=1391>.
- Law, J., & Hassard, J. (1999). *Actor network theory, and after*. Oxford: Blackwell Publishers.

- Law, J. (2004). *After method: mess in social science research*. Oxon: Routledge.
- Lenka, L. (2007). Private language: recognizing a useful nonsense. *AI and Society*, 21(No.1-2), 14-27. London: Springer-Verlag.
- Levy, D. (2008). *Love and Sex with Robots*. London: Duckworth Overlook.
- Lisberger, S. (1982) *Tron*. [Film] US: Walt Disney Productions.
- Loebner, H. *The Loebner prize*. Accessed on 3 April 2009, from: www.loebner.net/Prizef/loebner-prize.html.
- Lucier, A. (1969). *I'm sitting in a room*. Audio artwork. Accessed on 3 June 2009, from: <http://www.ubu.com/sound/>.
- Lumet, S. (1964). *Fail-safe* [Film]. Columbia: Columbia Pictures.
- Van Lun, E., (2010) *Chatbots Directory*. Accessed from January 2010 from: www.chatbots.org.
- Lyons, D. (1999). The world wide web of surveillance; the internet and off-world power flows. In H. McKay, & T. O'Sullivan (Eds.), *The media reader: continuity and transformation*. London: Sage Publications.
- Liotard, J.-F., & Thébaud, J.-L. (1985). *Just gaming* (B. Massumi, Trans.). London: Manchester University Press.
- M. Taqi-ud-Din Al-Hilali, & M. Muhsin Khan. Translation of the meanings of the noble qu'ran in the English language.
- Macgregor Wise, J. (1997). *Exploring technology and space*. Thousand Oaks, California: Sage Publishers.
- McCarthy, T. (2002) *Invoking the invocation*. Accessed on 20 July 2009, from: <http://www.milgramreenactment.org/pages/tom.xml?location=4&page=5&text=5>).
- Manjoo, F. (2002). A.I. expert lands in real trouble. *Wired Magazine*. San Francisco: Condé Net, Condé Nast. Accessed on June 2009, from: <http://www.wired.com/politics/law/news/2002/06/53072>
- Markoff, J. (2006). Entrepreneurs see a web guided by common sense. *New York Times*. Accessed on 20 June 2009, from:

<http://www.nytimes.com/2006/11/12/business/12web.html?ei=5090&en=a54d6971614edc62&ex=1320987600&pagewanted=all>.

Marres, N. (2002). May the true victim of defacement stand up! On reading the network configurations of scandal on the web. In B. Latour, & P. Weibel (Eds.), *Iconoclasm*. (pp. 486-489). Cambridge, Massachusetts: MIT Press.

Marres, N., & Rogers, R. (2005). Recipe for tracing the fate of issues and their publics on the web. In B. Latour, & P. Weibel (Eds.), *Making things public, atmospheres of democracy*. (pp.922-933). Cambridge, Massachusetts: MIT Press.

Massumi, B. (2000). Too-blue: colour-patch for an expanded empiricism. *Cultural Studies*, 14(2), 177-226. London: Routledge.

Massumi, B. (2002). *Parables of the virtual*. Durham: Duke University Press.

Massumi, B. (1995). The autonomy of affect. *Cultural Critique*, 31(Part II), 83-109. Minneapolis: University of Minnesota Press.

May, T. (2005). *Gilles Deleuze: an introduction*. Cambridge: Cambridge University Press.

McKinstry, C. *Suicide note*. Accessed on 20 July 2008, from: www.ectopia.us.

McKinstry, C. *Suicide note*. Accessed on 20 July 2008, from: www.joelsoftware.com.

McKinstry, C. *The MindPixel project*. Accessed 23 July 2008, from: www.mindpixel.com/chris.

Milgram, S. (1974). *Obedience to authority*. London: Tavistock.

Milgram, S. (1992). *The individual in a social world: essays and experiments*. London: Tavistock.

Nold, C. (2006) Windle, A. (Designer) *Greenwich emotion map*. Independent Photography & Ordnance Survey: Greenwich.

Noon, J. (1996). *Automated Alice*. London: Black Swan Books.

O'Riley, T. (1998). *Representing illusions space, narrative and the spectator in fine art practice*. London: Open University.

- Orwell, G. (1940). *Inside the whale and other essays*. London: Victor and Gollancz.
- Parr, A. (2005). *The Deleuze dictionary*. Edinburgh: Edinburgh University Press.
- Picard, R. (2000). *Affective computing*. Cambridge: MIT Press.
- Pisters, P. (1998). From mouse to mouse - overcoming information. *Enculturation* Accessed on 12 June 2009, from: http://enculturation.gmu.edu/2_1/pisters.html.
- Proyas, A. (2004). *i, Robot* [Film]. UK: 20th Century Fox.
- Sacks, H. (1992). *Lectures on conversation* (1, 2). Oxford: Blackwell.
- Salkeld, R. (1970). *War and space, technological surprise*. New Jersey: Prentice Hall.
- Sargent, J. (1970) *Colossus: the forbin project*. [Film]. US: Universal Pictures.
- Schwenger, P. (1999) *Fantasm and fiction: on textual envisioning*. Stanford: California.
- Scott, R. (1982) *Bladerunner*. [Film] US: Warner Brothers.
- Sedgwick, E. (2003). *Touching and feeling*. Durham: Duke University Press.
- Sedgwick, E., & Frank, A. (1995). *Shame and its sisters, a Silvan Tomkins reader*. Durham: Duke University Press.
- Seltzer, M. (1997). Wound culture: trauma in the pathological public sphere. *October*, 80, 3-26. Cambridge, MA: MIT Press.
- Shaviro, S. (2003). *Connected, or what it means to live in the network society*. Minneapolis: University of Minnesota.
- Shouse, E. (2005). Feeling, emotion, affect. *M-C Journal, A Journal of Media and Culture*. Accessed on 12 September 2008, from: <http://journal.media-culture.org.au/0512/03-shouse.php>.
- Shubik, M. (1975). *The uses and methods of gaming*. Oxford: Elsevier.

- Singh, P. (2005). *EM-ONE: An architecture for reflective commonsense thinking*. Cambridge, MA: MIT Press.
- Spielberg, S. (2001). *AI* [Film]. Hollywood & Oregon: Dreamworks, Warner Bros.
- Stanislavsky, K. In Carnicke, SM. (Eds.) ([1936] 1993) *The Actor: Work on Oneself: Konstantin Stanislavsky*. Trnsl. Benedetti J. Massachusetts: MIT Press, 37(1) 38-42.
- Stanton, A. (2008). *Wall-e* [Film] US: Walt Disney Productions.
- Stengers, I. (1997). *Power and invention, situating science* (P. Bains, Trans.). Minneapolis: The University of Minnesota.
- Stengers, I. (2000). *The invention of modern science* (D. W. Smith, Trans.). Minneapolis: University of Minnesota.
- Stengers, I. (2005). Deleuze and Guattari's last enigmatic message. *Journal of the Theoretical Humanities*, 10(2), 151-166. London: Routledge.
- Stewart, K. (2009) *Seminar on affect*. Texas: University of Texas. Accessed on 6 June 2009, from: www.laits.utexas.edu/cultural_studies/affect.pdf.
- Strate, L., Jacobson, R., & Gibson, S. (2003). Surveying the electronic landscape: an introduction to communication and cyberspace. In *Communication and cyberspace, social interaction in an electronic environment*. (pp. 1-28). New Jersey: Hampton Press.
- Suchman, L. (2007). *Human-machine reconfigurations* (2nd ed.). New York: Cambridge University Press.
- Teil, G., & Latour, B. (1995). The Hume machine: can association networks do more than formal rules? *Constructions of the Mind*. Accessed on 15 April 2009, from: www.stanford.edu/group/SHR/4-2/text/teil-latour.html.
- Telotte J.P. in Kolker, R.P. (2006). *Stanley Kubrick's 2001: a space odyssey*. USA: Oxford University Press.
- Theys, F. (2004). *Technocalyps* [Television, three part documentary series]. Brussels.
- Thompson, M. (2009). *When daddy is off at war: a hologram home?* Accessed on 8 July 2009, from: <http://www.time.com/time/nation/article/0,8599,1870426,00.html>.

Till, N. *The voice in modernity, proposal for a three-year research project*. Accessed on 20 July 2008, from: www.sussex.ac.uk/cromt/1-3-3html.

Tomkins, S. (1995). *Exploring affect: the selected writings of Silvan Tomkins*. Cambridge: Cambridge University Press.

'Timothy,' U. (2000). *Chris McKinstry replies: telescopes, AI and more*. Accessed 23 July 2008, from: <http://slashdot.org/articles/00/07/04/2114223.shtml>. and username:michael, username:new-black-hand. Alice v.s Alice. Accessed on 1 January 2009, from: <http://slashdot.org/articles/02/11/17/1914241.shtml?tid=133>.

Wachowski, (1999). *The Matrix*. [Film]. UK: Warner Brothers Pictures.

Wallace, R. Alice. Accessed on 9 July 2009, from: <http://alice.pandorabots.com/>.

Wallace, R. Lilith. Accessed on 9 July 2009, from: <http://www.pandorabots.com/pandora/talk?botid=b9b96b247e34f4f2>.

Wallace, R. (2005). *Be your own botmaster: the step by step guide to creating, hosting and selling your own A.I. chat bot on Pandorabots*. Oakland, CA: Alice A.I. Foundation.

Weizenbaum, J. ([1976] 1984). *Computer power and human reason*. Middlesex: Penguin Books.

Wheeler, H. Fail-Safe then and now. *The Idler*, 29 May 2000, 2(32). Accessed on 20 July 2009, from: www.the-idler.com.

Whitehead, C. (1999). *The intuitionist*. London: Granta/Anchor Books.

Windle, A. (2006a). Audio rudiments: public things questioning the production of norms. *Reviewing humanness: bodies, technologies and spaces*. EASST: Lausanne.

Windle, A. (2007a). How practice makes no[n]sense in an affectual study of software agents. *Deleuze, technology, ethnography*. IT University: Copenhagen.

Windle, A. (2007b). How practice makes no[n]sense in an affectual study of software agents. *Deleuze, Technology and Ethnography*. Copenhagen: ITU University.

Windle, A. (2006b). Evening talk for the robot talent show. *Artbots*. KASK Academie: Ghent.

Windle, A. (2006c). Evening talk for on artbots and chatbots. *Dorkbot Christmas Special*. Limehouse Town Hall: London.

Wittig, M. (1992). *The straight mind and other essays*. (pp.90-100). New York: Harvester Press.

Woolgar, S. (1988). *Knowledge and reflexivity*. London: Sage Publications.

Žižek, S. (2004). *Organs without bodies: Deleuze and consequences*. New York: Routledge.

Žižek, S. (2008). *On violence*. London: Profile Books.