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Electric Amateurs

**Literary encounters with computing
technologies 1987-2001**

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**PhD in English Literature
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DECLARATION

This is to certify that the work contained within has been composed by me and is entirely my own work. No part of this thesis has been submitted for any other degree or professional qualification.

ABSTRACT

This thesis considers the portrayal of uncertain or amateur encounters with new technologies in the late twentieth century. Focusing on fictional responses to the incipient technological and cultural changes wrought by the rise of the personal computer, I demonstrate how authors during this period drew on experiences of empowerment and uncertainty to convey the impact of a period of intense technological transition. From the increasing availability of word processing software in the 1980s to the exponential popularity of the “World Wide Web”, I explore how perceptions of an “information revolution” tended to emphasise the increasing speed, ease and expansiveness of global communications, while more doubtful commentators expressed anxieties about the pace and effects of technological change. Critical approaches to the cultural impact of computing technologies have tended to overlook the role played by perceptions of expertise and familiarity, and my thesis seeks to redress this by identifying a broad range of imagery, language and cultural references used to depict amateur or inexperienced encounters with computing technologies.

My interest in literary representations of amateur or marginalised users of computing technology reveals how the ease and speed of reading and writing promised by technological expertise can be countered by uncertainty arising from limited understanding of the complex processes involved. In a pre-smartphone age, the computer loomed as an object which was simultaneously baffling and enchanting, filled with potential but also obscure in its fundamental workings. Examining instances within experimental literary fiction and poetry which portray, imply, or respond to, encounters with personal computing, I demonstrate how individuals’ attempts to understand a technologically-inflected world can be described and enacted by the use of unusual narrative and poetic devices, where experimental literary strategies work to recreate the complex sensations associated with thrilling, difficult, or incomprehensible aspects of information technologies.

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INTRODUCTION

Don DeLillo's 1997 novel *Underworld* ends with a climactic vision of an online environment in which "everybody is everywhere at once" (808). Subtitled "*Keystroke 2*," the novel's concluding section imagines an electronic afterlife for "cold war nun" Sister Edgar (245). After her death, Edgar attains a posthumous existence on the internet, where she is "exposed to every connection you can make on the world wide web":

There is no space or time out here, or in here, or wherever she is. There are only connections. Everything is connected. All human knowledge gathered and linked, hyperlinked, this site leading to that, this fact referenced to that, a keystroke, a mouse-click, a password—world without end, amen. But she is in cyberspace, not heaven, and she feels the grip of systems. [...] When you decide on a whim to visit the H-bomb home page, she begins to understand. Everything in your computer, the plastic, silicon and mylar, every logical operation and processing function, the memory, the hardware, the software, the ones and zeroes, the triads inside the pixels that form the on-screen image—it all culminates here. (DeLillo, *Underworld* 825)

Intertwining Edgar's haunting presence with imagery of an atomic explosion, *Underworld's* conclusion contemplates the dangerous allure of connectivity by aligning the "coupling" of hyperlinks with the fusion of nuclear power. Like several of the texts I discuss in this thesis, DeLillo's portrayal of the Web in *Underworld* is influenced by 1980s cyberpunk, and the limitless connectivity of this version of the Web recalls William Gibson's conception of cyberspace as "[l]ines of light ranged in the nonspace of the mind, clusters and constellations of data" (Gibson, *Neuromancer* 67). However, unlike the rarefied "nonspace" portrayed in *Neuromancer*, DeLillo's reference to the constituent parts of "your computer" returns this vast array of "ones and zeroes" to its basis in a solid object, a computer which faces the individual as part of a domestic environment. "[Y]ou look at the things in the room," the novel concludes, "offscreen, unwebbed [...] you try to imagine the word on the screen becoming a thing in the world" (827).

The penultimate passages of *Underworld* treat the Web and the technological systems by which it is accessed with wary scepticism, warning that “intersecting systems help pull us apart” (826).¹ This final section of the epilogue reworks DeLillo’s 1994 short story “The Angel Esmeralda”, and several passages remain identical to the earlier work, tracing the movements of two nuns through a deprived area of the Bronx before concluding with the seemingly miraculous vision of a murdered girl’s face on a billboard. However, whereas “The Angel Esmeralda” never mentions computing technologies, references to the impact of personal computing and the Web are spliced throughout the *Underworld* epilogue, where Sister Edgar’s transcendent reconfiguration in cyberspace is framed by the italicised subtitles “*Keystroke 1*” and “*Keystroke 2*,” and introduced via direct address to an unnamed computer user. This technique invites slippage between online “lurker” Jeff, who discovers Sister Edgar’s vision after he types in “seventeen characters and then *dot com miraculum*” (807), and the novel’s reader, who is figuratively invited into a similar encounter as the section opens with the faux-url “http:blk.www/dd.com/miraculum” (810).

The inclusion of extended references to computing technologies in *Underworld*’s epilogue suggests that DeLillo had devoted serious contemplation to the rise of the Web in the years between the publication of “The Angel Esmeralda” and its transformation into a conclusion for *Underworld*.² During this time, the social, cultural and economic impact of the rise of personal computing and the Web exploded into popular consciousness, and the introduction of computing technology and the “world wide web” in DeLillo’s reworking of his earlier short story captures a number of significant changes in perspectives on computing technologies. For example, the increasing availability of personal

¹ Although I read these passages as a sceptical portrayal of newly “connective” technologies, others have taken DeLillo’s declaration that “[e]verything is connected” at face value. Tony Tanner calls the final pages of *Underworld* a regression into “sentimental piety” (Tanner 70), while James Annesley suggests that “Sister Edgar is swept away into an internet nirvana, a world where science, economics and mysticism intersect,” and finds it strange that “[i]dentity, religion and technology combine to produce this curious technological apotheosis” (Annesley 71). I disagree with these evaluations, since the epilogue to *Underworld* consistently undercuts the glib rhetoric of its own statements about connectivity. This is evident, for example, in the sinister alignment of hyperlinks with the destructive capacities of nuclear fusion, repeated reminders that “intersecting systems” promote disjunction, and the acknowledgement that the final word which appears onscreen, “Peace”, is “only a sequence of pulses on a dullish screen and all it can do is make you pensive” (827).

² The importance of DeLillo’s reworking of “The Angel Esmeralda” is further emphasised by the fact that other stories – “Panko at the Wall”, “Sputnik” – are included in *Underworld* without any significant alteration.

computers and access to the Web during the mid-nineties is reflected in DeLillo's portrayal of Ismael, a local entrepreneur who is convinced that his sales of scrap metal will be multiplied if he is able to acquire a computer. DeLillo's depiction of this new technology interweaves religious imagery with the language of capital and consumerism. For Ismael, who "loves the language of buying and selling" (814), his plan to "go on-line" is to allow his trade to "[g]o, like, global" (812). "Some people have a personal god, okay," Ismael teases the nuns, "I'm looking to get a personal computer. What's the difference, right?" (813). DeLillo's portrayal of the Web is similarly loaded with social and cultural import, depicting it as a gigantic pseudo-space whose functions are simultaneously archival – in its collation of "[a]ll human history" – and transitional, as the narrative invites "you" to forge new connections via the interactions of "a keystroke, a mouse-click, a password" (Ibid 825).

DeLillo's splicing of computing technologies into his revision of "The Angel Esmeralda" for the epilogue to *Underworld* provides a conceptual starting-point for this thesis, which examines how literary fiction and poetry set out to portray, perform, or respond to unfamiliar encounters with computing technology throughout "the long 1990s."³ Exploring the significance of personal computing and the rise of the Web for the production and reception of literary poetry and fiction, I consider how literary works of the 1990s endeavour to depict sensations of delight, fear and uncertainty arising with individuals' engagement with new technologies. My decision to focus on literature from this particular time is prompted by a wish to engage with a nexus of concerns emerging in response to developments in personal computing. These include impressions of the potential for individual empowerment offered by access to new software and operating systems, fears of misunderstood or uncontrollable new technologies, and growing concerns about individuals' place within an expanding network of corporate and commercial interests. Treating the broad span of the "long 1990s" as a distinct historical period, I characterise it as a liminal moment

³ The term "long 1990s" is adapted from Eric Hobsbawm's definition of the "long 19th century". Soochul Kim explains that "[t]he long 1990s [...] refers to a period ranging from the late 1980s to the early 2000s" (Kim, "Space, Culture, and Identity in a Globalizing City" 354). John Dumbrell similarly defines the "long 1990s" as "the era between the benevolent external shock of 1989 (the fall of the Berlin Wall) and the malevolent external shock of 9/11" (Dumbrell, *US Foreign Policy* 82).

during which the possibilities and capacities of computing technology were already evident, but by no means pervasive. My analysis of experimental literary works from this period reveals a fascinating confluence of thematic content with sensory experimentation, demonstrating how innovative literary forms can contribute alternative ways of addressing new encounters with technology and their social and cultural implications.

In 1987, the theorist Michael Heim set out to describe the sensation of using computer-based word processing for the first time. His impression of the practical frustrations and potential rewards of engaging with the obscure “System” of a personal computer introduces this technology as a strange new phenomenon, which can be mastered only after a painstaking learning process. Heim’s account emphasises the otherworldly strangeness of this encounter:

How do you gain access to the new phenomenon on first encounter? Through a new language, of course. You learn to address yourself to unheard of entities. You learn to speak of files that possess no apparent physical dimensions, menus offering a selection of nonedibles, and monitors that provide a certain vigilance over your own words [...] As you learn your way around the System, you come to feel literate in a new way. (Heim 127)

Taking my cue from Heim’s analogy of acquiring “a new language,” my approach here is rooted in close analysis of the linguistic and formal elements used to represent the difficulty, thrill and strangeness of attempting to address “unheard of entities” or responding to the seeming vigilance of monitors and menus. By scrutinising the use of innovative literary devices and formats to depict encounters with computing technology, I set out to trace the affective, emotional and intellectual ramifications of such encounters with new and unfamiliar information technologies in the late twentieth century.

Although this thesis refers to the literary context of established authors such as DeLillo and Gibson, I have chosen to focus predominantly on less well-known works whose experimentation with innovative formats endeavours to capture complex affective responses associated with encountering information technologies. The authors considered here share an interest in the portrayal of

non-expert encounters with computing technologies, and my approach considers how literary forms and devices – often inspired, enabled or augmented by the use of dedicated software – can be used to imply and/or enact the ramifications of amateur engagement with computers and their environments. Timothy Lenoir finds that “[t]he affective domain is being reshaped by electronic media” (Lenoir, “Contemplating Singularity” 579), while Eduardo Kac advocates treating works “as verbal/visual/acoustic entities and as cognitive/perceptual/kinesthetic experiences” (Kac, *Media Poetry* 8). The intersection between literary experimentation, electronic media and sensory response is a key concern throughout my analysis. Combining close reading with consideration of thematic content and affective response, I seek to demonstrate how the works I discuss consistently emphasise the embodied reactions of uncertain users as they describe, enact or perform encounters with unfamiliar technological objects and functions. In doing so, they demonstrate how the portrayal of individuals’ attempts to understand a technologically-inflected world can intersect with creative use of a range of narrative and poetic techniques.

In order to ensure clarity and focus, I have chosen to delimit my project by concentrating on the 1990s as a single decade. The central texts analysed in this thesis combine thematic content with formal experimentation, often deploying unusual formats which explore new capacities enabled by the use of computer-based word processing software and the multimedia capacities of publication on disk or online. I begin with Kamau Brathwaite’s homage to word processing in the 1987 poem “X/Self’s Xth Letter to the Thirteen Provinces,” which provides a vivid example of how desktop word-processing might be used to enhance authorial control over the aesthetic display of the text, while also introducing concerns about expertise and a sense of thrilled anticipation when encountering unfamiliar technologies. These issues of expertise and anticipation are explored further in imagery of erasure, ephemerality and haunting in Brathwaite’s short story “Dream Chad,” and Chapter Two considers the resonances between Brathwaite’s tale, the performed deletion of William Gibson’s self-erasing poem “Agrippa”, and portrayals of readerly disorientation in Shelley Jackson’s hypertext fiction *Patchwork Girl*. Chapter Three demonstrates how *Patchwork Girl’s*

fragmented female narrator conceptualises her experience of technology in terms of exotic digital spaces, comparing its figurative portrayal of hypertext with depictions of the Web in Jeanette Winterson's *The Powerbook* (2000) and Jennifer Egan's novel *Look at Me* (2001). Finally the Flash-based poetry of Young-Hae Chang Heavy Industries, the subject of my concluding chapter, deploys the multimedia capacities of online publication to offer a reading experience which replicates many of the concerns described in the above texts, deliberately disorienting and alarming its assumed audience in order to expose the controlling aspects of contemporary technocorporate environments.

Of course, the 1990s are not vacuum-sealed, and my analysis is alive to the influences of earlier literary and artistic influences as well as the reflections of later theorists. Though I have referred to both sparingly, two significant creative precursors for my discussion are William Gibson's 1982 novel *Neuromancer* and the depiction of lethal supercomputer HAL in Stanley Kubrick's film *2001: Space Odyssey*. Whereas Gibson's portrayal of cyberspace was tremendously influential in developing concepts of virtual space in the early years of the World Wide Web, HAL's highly logical malfunction in *2001* exemplifies concerns about the dynamics of power and control in human interactions with mystifying technological entities. Both examples have become lodged in a cultural and critical imaginary relating to the possible thrills and threats of new technologies, and their traces recur in discussions and representations of computing and the Web even when they are not referenced directly. I have also endeavoured to consider specific literary and artistic influences brought to bear on the texts I discuss, from the gothic themes underpinning Shelley Jackson's *Patchwork Girl* to the influence of Modernism, Dada and Fluxus artworks evident in Young-Hae Chang Heavy Industries' fast-moving digital poems. In each case, recognition of these texts' historical, cultural and literary influences sheds light on their approach to a contemporary moment, not only in their remediation of existing literary and artistic conventions, but also in their resurrection of established tropes and symbols in order to convey a new experience.

The final decade of the twentieth century witnessed drastic changes in approaches to computing technologies. Observing that “[c]omputers and electronics have become pervasive in everyday life,” Swedin and Ferro find that “[w]hat was once high technology is now mundane” (Swedin & Ferro 131).⁴ Responding to such comments, my project aims to resurrect and record an impression of the perceived strangeness of new computing technologies as they rose to prominence in the late 1980s and 1990s. The implications of technological unfamiliarity are adeptly conveyed in these literary texts’ endeavour to conceptualise a number of social, cultural and personal transitions brought about by the rise of the World Wide Web and increasing accessibility of computing technologies for individual use. Despite the relative chronological proximity of the 1990s to the time of writing, users’ interactions with computing technologies have changed drastically in the intervening years; Kac declares that “time is relative” and “in the digital age, ten years may be perceived as equivalent to several decades of pre-digital time” (Kac, *Media Poetry* 9).⁵ For example, Heim’s declaration of the need to “learn your way around the System” implies a process of gradual adaptation and self-improvement, whereas the twenty-first century witnessed the maturing to adulthood of a new generation of “digital natives” for whom engagement with computing technologies has been a matter of everyday lived familiarity, rather than the kind of slow and painstakingly self-aware learning process described by Heim. The incipient obsolescence of the devices, systems and approaches described by the texts I discuss – some of which acknowledge their own status as records of a swiftly passing moment – adds a frisson of ephemerality to their content and approach.

Just as the literary works examined in this thesis invite comparison with earlier cultural influences, they also provide a foundational framework for discussion of subsequent trends and debates. Significant developments of the 1990s whose reverberations continue to be felt today include the increasing

⁴ Sofia refers to this as “background relations,” where “[i]n an ordinary sense, computers and computerised systems constitute part of the background, taken-for-granted texture of life in the information society (e.g. the ubiquity of automatic bank tellers and laser-readable bar codes)” (Sofia, “Virtual Corporeality” 63)

⁵ The rapidity of technological change during and after the 1990s has been noted by a number of artists, critics and commentators. Writing in 2008, Naomi Baron observes ruefully that “[a]n article on IM [Instant Messaging] published in 1998 now reads like quaint history,” while “[s]tatistics collected six months ago are likely out of date (Baron, *Always On ix*).

economic feasibility and ease of use for personal computers from the late 1980s onwards;⁶ the popularisation of email and instant messaging as a method of near-instant written communication; the development of removable and remote storage options whose much larger capacities replaced the floppy disk; and the exponential growth and increasingly global reach of the internet as a resource for finding and sharing information and multimedia of all kinds. In America and other regions with sufficient economic wealth to support such technological luxuries, the 1990s saw the gradual advance of the personal desktop computer as it developed into a tool for “everyday” use. Ushered into the domestic realm, the computer offered a portal to a new kind of electronic space which was treated with delight by some and feared by others, and eventually achieved sufficient familiarity to be approached in terms of boredom and banality.

Although the swift pace of technological change since the late 1980s has involved the rapid alteration of processes and systems, we are still living through the repercussions of accelerated progress in the “digital age,” and many of the concerns evident in the works I discuss in this thesis provide an important context for more recent social and cultural debates. Late twentieth century dialogues about the rising popularity of the personal computer and the “World Wide Web” reverberate in post-millennial discussions about the increasing ubiquity of “smart” devices, concerns about overreliance on media devices and the rise of the Kindle and other e-reading platforms. For example, in an essay published in *The Atlantic* in 2008 and subsequently expanded into a full-length study, *The Shallows*, Nicholas Carr speculated that the rise of information culture might reduce individuals’ capacity for attention. “Immersing myself in a book or a lengthy article used to be easy,” he confesses, but “[t]hat’s rarely the case anymore. Now my concentration often starts to drift after two or three pages” (Carr, “Is Google Making us Stupid?” n.pag.). When Carr blames this decreasing concentration on technologized environments, he echoes identical concerns expressed over a decade previously in Sven Birkerts’s conviction that “[e]verything

⁶ Swedin and Ferro refer to the rise of “ubiquitous computing,” noting that “in the 1990s, one person now had many computers to serve him or her in a variety of roles. A digitally oriented person today may use a desktop PC, numbers server computers through the Internet, a PDA, and an MP3 player” (Swedin & Ferro 132). The effect extends beyond personal computing; they add that “non-computer-oriented people use watches, stereos, televisions, automobiles, cell phones, pagers, microwaves, and other electronic equipment, all equipped with embedded microprocessors” (Ibid).

about modern (or is it postmodern?) life carries us away from the state that is propitious for deep reading” (Birkerts 148).⁷ Similarly, the confluence of commercial influences and personal lives portrayed in Jennifer Egan’s *Look at Me* and the Flash poetry of Young-Hae Chang Heavy Industries anticipate cautionary tales about the intertwining of corporate and personal experiences facilitated by the inexorable rise of social media and the use of tracking devices to record consumer habits since the early years of the new millennium.⁸

The affinity between contemporary debates and the fears, concerns and delights of the 1990s indicates the lasting impact of developments in the final decade of the twentieth century. However, few studies thus far have treated the 1990s as a distinct historical and literary period. In his introduction to *British Fiction of the 1990s*, Nick Bentley notes that “[a]ttempting to periodize literary history is a process that is always fraught with difficulties, and the 1990s is no exception” (Bentley, *British Fiction of the 1990s* 2). Defining the decade in geopolitical terms, he describes it as bookended by “two international events, standing at either end of the 1990s” (Bentley 2). For Bentley, a distinct era begins with the “shift in power relationships in world politics” after the fall of the Berlin Wall in 1989, and ends with the “symbolic power of the collapse of the Twin Towers of the World Trade Center” (Bentley 3). Samuel Cohen agrees that this is a “period whose end is marked by September 11” (Cohen, *After the End of History* 3). Cohen’s focus is broadly historical, and he proposes the possibility of viewing the nineties as an “interwar decade”:

When seen as bracketed on one side by the end of the Cold War and on the other by the terrorist attack and subsequently declared “war on terrorism”—by the fall of the Wall and the fall of the Towers—the 1990s begins to look like an interwar decade. (Cohen 4)

Cohen’s view is self-consciously US-centric, and he supports his “interwar” suggestion by clarifying that “there was no felt threat of harm to American soil”

⁷ Concerns about the interrelation of new media forms and changing levels of concentration also stretch back into previous decades and centuries, as discussed in Jonathan Crary’s *Suspensions of Perception: Attention, Spectacle, and Modern Culture* (2001); see also Robert Hassan’s *The Age of Distraction: Reading, Writing, and Politics in a High-Speed Networked Economy* (2011) and Alan Jacobs, *The Pleasures of Reading in an Age of Distraction* (2011).

⁸ As O’Riordan and Phillips observe, “[t]hrough the 1990s, ownership and control of the infrastructure of the internet, including backbone carriers, ISPs and Web Portals, became increasingly the domain of fewer, larger and more integrated media corporations” (O’Riordan & Phillips 5).

(4) during this time. Bentley makes a similar claim, but is quick to recognise that wars continued throughout the decade, including the first Gulf war, the Balkan crisis, and genocidal conflict in Rwanda. Nevertheless, and perhaps because of their emphatically Western focus, Cohen and Bentley's statements concur in positioning the 1990s as a discrete historical period, characterised as a period of relative non-eventfulness sandwiched between events of massive international import and strife on a global scale.

The geopolitical timeframe suggested by Bentley and Cohen coincides with the period of intense technological change which is my central interest in this thesis. While Barry Lewis characterises the pre-1989 Cold War era as "a world uneasy with rapid technological change and ideological uncertainties" (Lewis, "Postmodernism and Literature" 121), the technological and ideological elements which prompted uncertainty during the Cold War era altered significantly with the arrival of the Web in the 1990s. Reflecting on the rise of the Web in an article written a few days after the 9/11 attack on the World Trade Center, DeLillo recalled the internet's alluring speed and the "utopian glow of cyber-capital" as it had appeared during the 1990s:

The dramatic climb of the Dow and the speed of the internet summoned us all to live permanently in the future, in the utopian glow of cyber-capital, because there is no memory there and this is where markets are uncontrolled and investment potential has no limit. [...] The internet is a counternarrative, shaped in part by rumour, fantasy and mystical reverberation. (DeLillo, "In the Ruins of the Future" n.pag.)

DeLillo's description portrays the Web as a futuristic medium, still evolving and still partially incomprehensible – a figurative space dominated by rumour and mysticism. His account captures the newness of a still-developing medium, which had only been "invented" as recently as 1989, when a proposal by Tim Berners-Lee "envisioned hypertext on the Internet, and the global information space it could create" (*The Internet: Biographies* 16).⁹

⁹ The invention of the World Wide Web built on an existing global network – the Internet – which was already being used for communication via listservs and forums and early versions of electronic mail. The two are often conflated in contemporary descriptions. Noting that "it is common for people to confuse the Web and the Internet," Paul Anderson offers a succinct explanation of the difference: "Where the Internet is a global system of

As indicated by DeLillo's description, the Web rose to prominence swiftly and decisively. In late 1990, Berners-Lee and Robert Cailliau performed the first exchange of information via a Web server, and the first Web browser, Mosaic, was released in 1993 (Evans & Schneider 21). By 1994 increasing numbers of users were beginning to build and browse web pages; by the year 2000 a so-called "dot.com bubble" had already expanded and burst. My timeframe in this thesis, however, extends slightly further back in order to consider accompanying developments in personal computing, word processing, and the use of hypertext for new narrative forms. Though it lacks the transformative glamour now associated with the invention of the Web, 1987 is a tremendously significant date in terms of the interrelation of technology and literary forms. At the beginning of the year, Apple released their new HyperCard system, whose relative ease of use and availability facilitated new experiments with new structural forms for literary production. In November 1987, Michael Joyce's hypertext fiction *Afternoon: A Story* was introduced at the first Association for Computing Machinery (ACM) Hypertext Conference. As I discuss in Chapter Two, Joyce's work is widely credited as the first published fiction to use hypertext links as a structuring device, and his collaborations with Jay David Bolter trailblazed the use of innovative technological developments for new forms of literary creativity.

1987 is also the year of publication for the poem which first sparked my interest in the use of formal literary experimentation to depict amateur encounters with computing technology. As I have noted, Brathwaite's "X/Self's Xth Letter to the Thirteen Provinces," published as part of the collection *X/Self*, is the focal point of my opening chapter. The poem details the reactions of narrator "X" as he endeavours to explain his passion for the possibilities and potential of word processing software to his recalcitrant and unconvinced mother. X is an archetypal amateur, who ruefully explains that he is no "Bojangles", expertly "toe-tappin'" on the keyboard (Brathwaite, *X/Self* 83). The impassioned tone of Brathwaite's poem opens up the possibilities and potentials of computing

networked computing devices, the Web is a global system of linked hypertext documents that sits on top of the Internet" (Anderson, *Web 2.0 and Beyond* 252). In other words, the Web is a way of making documents visible and accessible, whereas the Internet is a medium for direct transfer of files. I have considered terminology carefully in this thesis, since "the Web" and "the World Wide Web" have fallen out of fashion and now seem dated terms. In light of the usage in the texts I am describing, however, I have decided to refer to communications online as "the Web" rather than "the Internet" in order to avoid confusion.

technology, portraying it as a strange encounter which can also be a source of creative experimentation. In the late 1980s and early 1990s, utopian notions of an “information revolution” emphasised the new technology’s potential for disseminating knowledge and facilitating communication, and Brathwaite’s vivid descriptions render such discussions in highly personal and subjective terms, approaching the computer as an “obeah blox” (Brathwaite, *X/Self*) which is simultaneously mysterious, magical and thrilling.

Brathwaite’s poem draws on established tropes and figures to conceptualise the narrator’s encounter with an unknown or unfamiliar system, and my analysis details his use of familiar imagery in order to portray the mysterious functioning of software. My discussion of this and other texts demonstrates how tropes and metaphors deployed to describe earlier technologies re-emerge in descriptions of amateur encounters with computing technologies in the 1990s. Thus Chapter Two considers the use of imagery of magic and haunting to account for misunderstood software processes, while Chapter Three explores the invocation of distant spaces as a way of conceptualising the virtual reach of the Web.¹⁰ The responses I trace here are part of a much wider historical context for new technologies’ impact on individuals’ impression of space, sensory responses and social interactions; Sconce’s *Haunted Media*, Davis’s *Techgnosis*, and Thurschwell’s *Literature, Technology and Magical Thinking* recount how similar metaphorical patterns were used to describe unfamiliar technological experiences in the nineteenth and early twentieth centuries. There is also a curious interplay of familiarity and exoticism in the accounts I discuss. Whereas Kamau Brathwaite explains a file’s seeming acquisition of a mysterious agency when “it” refuses to print by attributing it the power of a warning or curse (Brathwaite, “Dream Chad”), Shelley Jackson uses imagery of stitching as a way of making sense of the hypertext software *Storyspace* (Jackson, “Stitch Bitch” n.pag.). Such patterns of imagery evolve in the context of practical technological developments as well as critical, theoretical and popular responses of the period, and my analysis considers how these fictional or fictionalised depictions relate to a range of fears and thrills

¹⁰ These are common tropes in critical material as well as creative approaches. Thus Victor Mosco observes that “computer technology appears to accentuate the importance of place, both physical and virtual. (Mosco, “Webs of Myth and Power” 37). Jodi Dean adds that “[i]maginings of cyberspace often employ metaphors of outer space” (Dean, “Webs of Conspiracy” 61).

associated with incipient technological and cultural changes.

The personal computer has been described in many different ways, even in the relatively short space of time which is my focus here. Echoing Brathwaite's reference to the computer as "obeah blox" (Brathwaite), Janet Horowitz Murray considers it an "enchanted object," with the capacity to open up new worlds for its user. In *Hamlet on the Holodeck*, Murray describes the computer as seeming "like an extension of our own consciousness, capturing our words through the keyboard and displaying them on the screen as fast as we can think them" (99). Her impression of multiple worlds opening up via the screen echoes Sherry Turkle's impassioned declaration that "[c]omputer screens are the new location for our fantasies, both erotic and intellectual" (26). First published in 1995, Turkle's study contains a striking account of the computer screen as simultaneously alluring and entrapping: "I now remain at my computer much longer than I used to at my paper writing," she observes, asking "[w]hy is it so hard for me to turn away from the screen?" before venturing to answer her own question:

The windows on my computer desktop offer me layers of material to which I have simultaneous access [...] When I write at the computer, all of these are present and my thinking space seems somehow enlarged. The dynamic, layered display gives me the comforting sense that I write in conversation with my computer. After years of such encounters, a blank piece of paper can make me feel strangely alone. (Turkle, *Life on the Screen* 29)

Recalling Heim's reference to the strangeness of files with "no apparent physical dimensions" (Heim 127), Turkle's impression of writing "in conversation" with the computer introduces the idea of the screen as interface to a system which, if not absolutely anthropomorphised, is certainly attributed an impression of agency. This semi-personification of systems recurs in the texts I describe, as narrators engage with the idea of the computer as a responsive object, anticipating its actions and becoming frustrated with its failures.

As illustrated by the descriptions of Murray and Turkle, access to the Web via the interface of the screen encouraged the adoption of metaphors of magic and distance. Swiss and Herman, for instance, relate the “magic” space of the Web to its possibilities for a new performance of identity:

[T]he Web can be understood as a space of “magic” in many ways, but most notably, perhaps, in that it forms a multimediated arena of performance in which identities are staged, negotiated, and transformed. Magic, for better or worse, pervades the Web—both as a material and symbolic practice of identity transformation, but also as the mythic representation of this transformative capacity. (Swiss & Herman, “Introduction” 2)

In their effort to capture an affective impression of the computer’s potential impact on those who interact with it, these comments fit within a broader pattern of imagery used to convey the emotional and intellectual effort of attempting to comprehend or control a new technological entity. However, such statements must also be qualified by acknowledging the opposing view, expressed in Wendy Chun’s view of the “banality” of the Web (Chun, *Control and Freedom* 254), or Cory Doctorow’s definition of navigating resources online as “an endless click-trance” (Doctorow, “Writing in the Age of Distraction” n.pag.). In these accounts, the lived experience of everyday computing technologies and “being online” risks failing to live up to rhetorical promises of speed and exploration. This is the subject of my final chapter, which considers the juxtaposition of impressions of thrilling speed with awareness of the many malfunctions and slownesses associated with being online, particularly in the dial-up days of the 1990s.

Although I have referred to personal computing technologies as representatives of the “everyday” or the “mundane,” this terminology is not intended to suggest that they are automatically available or ubiquitous. Instead, it seeks to distinguish them from more distant or intangible technologies, developments associated with distant and/or inaccessible “high” technology of the space age and science fiction. Brathwaite’s poem “X/Self’s Xth Letter” ruefully concedes that the technological encounter it describes is not “sputnik” or “star

wars” (Brathwaite, *X/Self* 83-4), but something altogether smaller and more intimate. This description captures a fundamental disruption caused by the personal computer’s transition from the gigantic mainframes of the 1960s into the realm of domestic spaces and “everyday” use. My discussion is also alert to the continuing difficulties of access to computing technology in economically marginalised regions throughout the world, where the prospect of owning a PC or gaining access to the “World Wide” Web continues to be a privilege rather than a “mundane” inevitability. Despite its rise to become an “everyday” phenomenon, detailed understanding of computing technology continued to be widely perceived as the preserve of an elite group defined by wealth and expertise throughout the 1990s, and this extended to practical economic issues of access and maintenance.¹¹

One of the key aspects of the 1990s was a growing – and still ongoing – debate between a cohort of artists and critics who valorised the potential of new technological systems, and others who envisaged problems arising from their rejection of traditional processes and perceptions. Writing in 1995, Ralph Lombreglia half-jokingly characterises the passionate debates around computing technology and the humanities as “terror and holy war,” noting that “present-day controversies about computers... usually require that one join a kind of religion” (Lombreglia n.pag.).¹² This “religion” was often bound up with issues of expertise, with instances of “technophobia” and “technophilia” depending on the commentator’s level of comfort with the processes described. In the early 1990s, Sven Birkerts’s perception of the specific qualities of computers and word

¹¹ Mossberger, Tolbert & Stansbury consider lack of expertise to be a vital factor in access to computing technologies, noting that “having access to a computer is insufficient if individuals lack the skills they need to take advantage of technology” (Mossberger, Tolbert & Stansbury 10). Considering transitions to the Web, Katz and Aspden observe that “Uncertainty about how to get started and the perception that computers are too complicated are nearly as important as cost and lack of access as barriers to getting started on the Internet” (Katz & Aspden, 1996). Mark Warschauer, on the other hand, suggests that concerns about lack of access and expertise associated with a “digital divide” were overplayed in the 1990s: “At an economic level, too much emphasis was being put on the so-called Internet economy, reflected in the wild surger of dot-com businesses, many of which went bankrupt after failing to earn a single dollar. At the societal level, the hottest idea was that of cyberspace, supposedly an entirely different plane of existence. Both of these perspectives reflected the errant view that information and communication technology was creating a parallel reality and that it was thus necessary for people to make the leap across the divide from the old reality to the new one” (Warschauer 11).

¹² Divisions between enthusiasts and the unconvinced in the 1990s are well-documented. For example, Malin notes that “the same technological power that many believed would allow the Internet to bring people together into a newly unified community has led others to worry about the technology’s destructive, addictive, hyperstimulating power” (Malin 199)

processing casts computing technologies as agents of change whose impact is emphatically negative rather than empowering. Characterised by reviewers as “a passionate defense of reading and print culture, and an attack on electronic media” (Blobaum n.pag.), Birkerts’s *Gutenberg Elegies* offers a stringent caution against unthinking absorption of computing into aspects of everyday life and creative practice.

The restricted approach of the unapologetic non-expert looms on the very first page of Birkerts’s introduction: “I cannot confront the big picture,” Birkerts informs his readers, because “I have neither the temerity nor the technological expertise” (Birkerts, *Gutenberg Elegies* 3). His solution is to rely on a series of personal anecdotes in order to reaffirm his personal refusal of the technologies he dismisses. In the introductory chapter, Birkerts declares his rejection of a word processor in favour of a “Luddite” typewriter:

I type these words on an IBM Selectric and feel positively antediluvian: My editors let me know that my quaint Luddite habits are gumming up the works, slowing things down for them. (Birkerts, *Gutenberg Elegies* 28)

Birkerts’s reluctance to engage with advancing information technologies associates technological innovations with an impulse towards unnecessary speed, setting up an opposition between “fast” technologies and “slow” analog objects while revelling in his own decision to cling to the contemplation he associates with slowness. As the world “hurtles on towards its mysterious rendezvous” with a technologised future, Birkerts mourns “the old act of slowly reading a serious book” (Birkerts, *Gutenberg Elegies* 6). The final paragraphs of his “Coda” reprise the biblical imagery begun with the above reference to “antediluvian” tendencies: the devil, Birkerts cautions, “claims to want to help us all along to a brighter, easier future [...] everything flowing at circuit speed” (228). In this construction, high-speed composition and consumption negate thoughtfulness; Birkerts ends his consideration of advancing technology by reiterating his own determination to “refuse it” (229).

As Ted Striphas has noted, Birkerts' act of "refusal" is only partial, since the typewriter he vehemently prefers is "not only mechanical but electrical [...] the very machine IBM touted in a 1962 advertising campaign as a device not for slowing you down but for making you 'faster... more productive'" (Striphas 25). Searle attacks the kind of stance exemplified by Birkerts in more vituperative terms, arguing that as technologies intervene "in every seam in our private lives, our social, economic, and educational institutions around the globe" (1179), a willingness to engage with them is essential. "[I]f one cannot compose at the keyboard," he declares, "one is a peasant in the electronic age" (1179). Searle mimics Birkerts's performed rejection of writing technology, retaining Birkerts's references to devils, deities and high-speed devices in order to celebrate his own high-tech writing environment:

As I write this, I am using equipment hooked up to several dozen servers, gateways, and multi-protocol routers. [...] I have two functioning networks, three telephone lines, more electronic gadgets and junk than is good for any person. Even the smaller of my two household servers, humming in the basement like profane little deities, could probably hold all the texts collected in the fabled library at Alexandria with room to spare. (Searle 1183)

Whereas Birkerts mourns "the old act of slowly reading a serious book" (Birkerts, *Gutenberg Elegies* 6), Searle proffers the potential storage of a multitude of books – too many for one person to work through, let alone to read "slowly". Searle's account fits within a broader framework of declarations which hailed the rise of personal computing and the Web as an "information revolution," perceived as a great and unavoidable change sweeping the world. I evaluate such perceptions in my discussion of John Perry Barlow's declarations of the Web as a frontier space in Chapter Three, while Chapter Four considers Young-Hae Chang Heavy Industries' resistance to the alignment of "friction-free" capitalism with new technologies.

One of the difficulties arising with the impression of a "holy war" between technophobes and technophiles is a tendency for those who publish and discuss work in digital or "digital-born" formats to speak about, for, and on behalf of,

those with significant existing expertise. In the early 1990s, this was partly due to the perceived lack of a non-expert audience; for example, Kac recalls that “in 1996 the audience for media poetry was fundamentally composed of the poets themselves and their immediate circles” (Kac, *Media Poetry* 8). However, the tendency to arcane difficulty among works experimenting with innovative formats is evident by observing the “instruction” sections in the *Electronic Literature Collection* online. For example, Jon Ingold’s *All Roads* promises “an unconventional interactive fiction experience,” but the reader must first follow instructions which seem almost satirical in their jargon-heavy demands on a non-technical reader:

To Begin...

Mac: Download and install Spatterlight if you do not already have a z-machine interpreter. Download and unzip allroads.zip and open the resulting fileallroads.z5 in your interpreter.

Windows: Download and install Gargoyle if you do not already have a z-machine interpreter. Download and unzip allroads.zip and open the resulting file allroads.z5 in your interpreter.

(Ingolds, *All Roads* n.pag.)

The terminology is simple – if you already know what it means – but unfathomable without prior knowledge. Christopher Funkhouser acknowledges that “readers, uninitiated in the process of approaching and comprehending a digital poem,” might require “a guide” (Funkhouser, *New Directions* 8), and examples such as the “instructions” accompanying Ingold’s piece raise issues of accessibility and comprehension, even before the putative audience encounters the text itself.

Marie-Laure Ryan wryly notes a comparable lack of readership in the field of hypertext fiction, where she detects “the precedence of theory over the object of study” (Ryan 582). Ryan observes that whereas “[m]ost of us read novels and see movies before we consult literary criticism and cinema studies,” it nevertheless “seems safe to assume that a vast majority of people read George Landow before they read any work of hypertext fiction” (Ryan 582). My decision to focus on non-expert encounters with information technologies is partly prompted by my

own frustration at a critical and creative tendency to treat technological topics in literature from the exclusive viewpoint of individuals with a high level of expertise. Few critical or creative approaches consider the perspective of the beginner, whose limited expertise might leave them struggling with texts, concepts and processes which may initially appear outside their capacity for comprehension. This is a key concern in my analysis of literatures which use innovative software formats, particularly in Chapters Two and Four. As Funkhouser asserts, “poetical celebration with exuberance, excess and surprise [...] has the capacity to enthrall once the organic functionality of the work is identified and understood” (Funkhouser, *New Directions* 22). Considering works’ “organic functionality” involves careful attention to the intersection of medium, form and theme, and this is an aspect I address in my discussion of formally or technically difficult texts such as William Gibson’s disappearing poem “Agrippa,” Shelley Jackson’s clickable hypertext *Patchwork Girl*, or Young-Hae Chang Heavy Industries’ fast-moving Flash poetry. This focus on careful and detailed close reading of prose and poetry published in innovative formats is prompted by a conviction that there is important work to be done in terms of excavating the anxieties and delights invited by, and portrayed within, these texts’ attempts to address technological phenomena in new ways.

My emphasis on amateur encounters with technologised forms has informed my methodological approach, which treats specific works of prose and poetry as a lens through which to approach critical and theoretical approaches. Since this discussion is not only concerned with representations of individual encounters with technologised versions of writing, but also with the literary methods and references used to portray these experiences, I consider each literary work in the context of relevant literary movements, theoretical approaches and critical contexts of the late twentieth century. This approach has led me to engage with a vast array of secondary material, from which I have been necessarily selective. Rather than map conclusive lines of creative or theoretical influence, I seek to indicate the correspondences and debts through which these creative works engage with and reflect theoretical, critical and popular perspectives. Many of the key influences for this discussion can be grouped in terms of their relevance

to the specific themes and approaches explored in each chapter, and are considered in relation to the works themselves. However, a number of critics and theorists deserve particular note for their significant influence upon my approach, either in the early stages of developing this topic or for their sustained importance throughout the thesis.

The writing of N. Katherine Hayles was an early influence on my own interest in the synergy between formal literary experimentation, the effect of computing technology on the production and consumption of texts, and the experience of the inexpert user encountering information technologies. Hayles contends that “[t]he long reign of print has induced a kind of somnolence in literary and critical studies,” which she classifies as “a certain inattentiveness to the diverse forms in which ‘texts’ appear” (Hayles, “Flickering Connectivities” n.pag.). Such statements sparked my interest in exploring specific qualities of certain media and modes of production, through what Hayles calls “medium-specific analysis”. In particular, Hayles’s chapter on the frustrations of engaging with Talan Memmott’s digital game/poem *Lexia to Perplexia* in 2008’s *Electronic Literature: New Horizons of the Literary* led me to wonder what the experience of encountering experimentation in technologically produced and mediated texts, and the way those responses are invited or provoked, might reveal about readers’ and writers’ approaches to technology more broadly. Hayles’s acknowledgement of the difficult aspects of *Lexia to Perplexia* also encouraged me to re-evaluate my own experience of frustration and disorientation when attempting to read experimental digital literary works.

Despite being a proficient user of computing technology, with a long personal history of using complex software and design programs, my early forays into reading what Hayles terms “electronic” creative writing were dogged by a sense of uneasiness and frustration. Hayles’s comments on the role of difficulty and confusion for readers encountering the work of Memmott and others led me to consider the possibility of analysing my own reactions as a productive factor, whose significance might extend to a wider commentary on the challenge. This recognition in turn informs my suggestion in Chapters Two and Four that the

aesthetic difficulties presented by works such as William Gibson's "Agrippa" or the fast-moving Flash poems of Young-Hae Chang Heavy Industries are designed to perform or enact the glitches and difficulties which often arise when engaging with computing technology. By emphasising encounter with technologies which do not always function as intended or expected, these pieces deliberately expose and undermine the rhetoric of ease and smoothness which continues to accompany representations of computing technologies within contemporary society.

Several of the literary works I discuss in this thesis challenge conventional perceptions of computing technology. Among these, one of the most pervasive is an understanding of the Web in terms of Deleuze and Guattari's conception of "smooth" and "striated" space in *Thousand Plateaus*. Discussing "a utopian rhetoric wherein cyberspace is conjured as a mythic space of ludic possibilities," Herman and Sloop consider how this rhetoric relates to Deleuze and Guattari's concept of "smooth space":

In Deleuzian terms, the utopia of cyberspace is a "smooth space" of interstitial nomadic movement and fluid subjectivity, in contrast to the "striated" space of logocentric constraint and embodied stability of the so-called meatscape reality on this side of the screen. (Herman & Sloop 81)

Citing Mark Dery's reference to "transcendentalist fantasies of breaking free of limits of any sort, metaphysical as well as physical" (Dery, *Escape Velocity* 8), Herman and Sloop raise concerns that this utopic vision is only accessible to "the goods-consuming subject of neoliberal capitalism" (Swiss & Herman, "Introduction" 3). Despite such concerns – discussed in Chapter Four – the association of "smooth" space with "cyberspace" has remained an enduring factor in discussions of computing and the Web.¹³ The comparison makes sense in terms

¹³ Comparisons of "smooth space" and "cyberspace" abound in critical perspectives. Jahshan finds that "it is immediately clear that smooth space is cyberspace/virtual reality, and that striated space is real life" (Jahshan 65), while Nunes offers a binary between the "information superhighway" as striated space and the idea of "surfing the web" as smooth space, suggesting that "the 'unfolding' of each page onto another both creates and reveals a smooth topography. The interface encourages users to navigate this space primarily by way of drift: 'browsing' from link to link, rather than moving from destination to destination" (Nunes 70). Gale sounds a note of scepticism, however, disagreeing with Nunes' binary opposition and arguing that "it is an oversimplification to suggest... that the World Wide Web is somehow an open moorland of smooth space," since it ignores "the more

of Deleuze and Guattari's opposition of smooth space to "the striations of money, work, or housing" (Deleuze & Guattari 481), and their definition of smooth space as "non-metric, acentred, directional" (Deleuze & Guattari 484) certainly invites comparison with the Web's ever-expanding potential of limitless hyperlinks and theoretically unrestricted access. However, the discussion in *Thousand Plateaus* also makes it clear that "smooth spaces are not in themselves liberatory" (500). Nor are smooth spaces entirely separable from the "striations" of navigation and events. Instead, "the struggle is changed or displaced in them, and life reconstitutes its stakes, confronts new obstacles, invents new paces, switches adversaries" (Ibid.). The works I discuss here tend to treat computed space and the Web as locations for obstacles and invention in this sense, shunning an oversimplified association of "smooth space" with smooth processing.

My concern with the interaction of individuals with standalone and networked computer systems is influenced by theoretical perspectives on how versions of personal and societal control might be related to the use of personal computing technology, not only as the writing tool which is my focus here but in a wide range of examples within society and culture. Gilles Deleuze's commentary on the computer as both symbol and facilitator of newly "universal" systems of "control" is a particularly significant text for this thesis. Deleuze's "Postscript on the Societies of Control" argues for a perceptible shift from Foucauldian "environments of enclosure" associated with the notion of disciplinary societies to the domination of "new forces" (Deleuze 3) which he characterises as flexible, malleable, and constantly adjusting; "a self-deforming cast that will continuously change from one moment to the other" (4) or "a sieve whose mesh will transmute from point to point" (Ibid.). In this new system, Deleuze hypothesises, individuals become "dividuals," and he selects the computer as emblematic symbol of this "society of control":

The old societies of sovereignty made use of simple machines—levers, pulleys, clocks; but the recent disciplinary societies equipped themselves with machines involving energy, with the passive danger of entropy and the active danger of sabotage; the societies of control

fluid and process-based approach offered by Deleuze and Guattari" (Gale, "Postmodernism and Cyberculture" 163)

operate with machines of a third type, computers, whose passive danger is jamming and whose active one is piracy or the introduction of viruses. (Deleuze 6)

The concept of such control mechanisms, for Deleuze, is “not necessarily one of science fiction”. However he acknowledges that if what he describes is indeed an incipient new form of societal control, “[w]hat counts is that we are at the beginning of something” (7), and it is this sense of being at “the beginning” of incipient forms of social and technological experience that underpins my research in this thesis. Deleuze’s definition of “societies of control” runs throughout my consideration of representations of individuals (not “dividuals”) who willingly enter into conversation and co-operation with computers and networks, but are not always aware of the possible ramifications of the tools they employ.

Referring to Deleuze’s “Postscript”, Wendy Chun’s analysis of the exoticisation of technology within corporate advertising rhetoric is a nuanced and thoughtful commentary which has proved to be another recurring reference-point for my discussion. In her introduction to *Control and Freedom*, Chun deems Deleuze’s depiction of societies of control to be both “persuasive” and “arguably paranoid” (Chun 9). Building upon Deleuze’s insistence on a link between control societies and capitalist systems, Chun explores how advertising imagery of the mid-late 1990s and early 2000s sought to construct the perception of a “mythical user” (46) of computing technology and the internet. To do so, she details a series of advertisements for internet service providers and computing software, discussing the depiction of marginal and “exotic” figures used to imply information technologies as simultaneously empowering and threatening. Chun concludes that commercials, magazine images and other popular representations “lure people onto the Internet with the threat of being left behind – they do not reassure people that everything will be ok” (254-55). This discussion of depictions of the computer screen as an access-point to parts of the world populated by incongruously technologized subjects provided a fruitful starting-point for my own consideration of the role of the computer screen as a complex interface between author and reader. Her work is also a key text for my discussions of race and marginality in the context of writing technologies, joined by Lisa Nakamura’s

Cybertypes: Race, Ethnicity, and Identity on the Internet; Race, Rhetoric and Technology by Adam Banks, and the collection of essays *Race In Cyberspace*, edited by Nakamura with Beth E. Kolko and Gilbert B. Rodman.

Issues of control and affect re-emerge in Patricia Clough's Introduction to a 2006 edition of *Social Text*, a special issue of the journal dedicated to discussing the interrelation of "Technoscience, Global Politics, and Cultural Criticism". Clough's introduction, and the articles contained within that edition, draw on and redevelop Deleuze's pronouncements on "societies of control" in the context of both "knowledge production" and "technological innovation", arguing for the importance of "information technologies" alongside their more strictly scientific counterparts as a site of active provocation rather than passive representation:

Along with the high-powered mathematical technologies that allow us to "see" matter as inherently dynamic, operating as a complex, open system under far-from-equilibrium conditions, and the biotechnologies that mass-produce genetic materials outside the organism, there also has been a development of information technologies, both entertainment and surveillance technologies, which are increasingly less about representation and the narrative construction of subject identities and more about affecting bodies, human and nonhuman, directly. (Clough 3)

In their attempt to map the interaction of individuals with technologies through examination of the role played by intervening and/or productive technologies in "affecting bodies", articles in this issue tend to focus on "expert" rather than "amateur" encounters with technology. Nevertheless the impulse to map a response to "technoscience" using terms and concepts drawn from affect theory provides an instructive example of drawing these two elements – technology and affect – together in surprising and effective ways. Other texts have also provided both terminology and exemplary methods, in particular essays by Athina Kuntsman and Patricia Clough in *Digital Cultures and the Politics of Emotion: Feelings, Affect and Technological Change*, Brian Massumi's *Parables for the Virtual*, and the essays collected in his edited volume, *A Shock to Thought*.

My interest in affect, and the effect of form on readers' experience of text, has led me to offer detailed analysis of visual and medium-specific experimentation in the works I discuss. In particular, I trace the capacities for innovation which arise from the potential for speed and responsiveness when developing and formatting text on the computer screen, through its affective ramifications for both writer and reader. My development of this aspect of the thesis has been strongly influenced by Johanna Drucker's work on material manifestations of literary texts. In particular Drucker's article "Visual Performance of the Poetic Text" in Charles Bernstein's *Poetry and the Performed Word* provided an important touchstone for my consideration of the performative elements of Young-Hae Chang Heavy Industries' Flash pieces, which use specific aspects of their visual display to convey an impression of performed narrative. Drucker argues for the crucial nature of "material means" as "an integral feature" in the "visual performance of a poetic work" (133):

Performance in this sense includes all of the elements that make the work an instantiation of a text, make it specific, unique, and dramatic because of the visual character through which the work comes into being. The specific quality of presence in such a work depends upon visual means – typefaces, format, spatial distribution of the elements on the page or through the book, physical form, or space. These visual means perform the work as a poem that can't be translated into any other form. (133)

Drucker's emphasis here on the impossibility of "translating" the form of a poem which utilises the "specific" qualities of its material presence as a means of performance has inflected my own interpretation of the nature of the medium of the computer in production of the texts I discuss in this thesis. Although Drucker's focus is on examples drawn from the early twentieth century, her insistence on "visual means" and "visual character" chimes with Hayles' call for "medium-specific analysis". The pairing has proved significant for my own consideration of the importance of form and format to the function and assumed readership of the texts I discuss.

As I have noted above, there are many literary and theoretical works I might have chosen as the basis for this study, and I refer to a number of them as points of reference and comparison. The texts I have included as focal points are selected for specific reasons; though they range across a variety of genres and publication formats, they are linked by a shared attempt to synthesise literary experimentation with themes of the inexperienced or marginalised individual's encounter with technology, depicting attempts to comprehend or control technological tools, and an evident interest in the impression of unknown or unknowable aspects portrayed in various relations to information technology. Since my interest lies with experimental literary portrayals of amateur or marginalised users of computing technology, my analysis has tended to linger on the representation of non-expert figures who occupy a seldom-acknowledged hinterland between enthusiasm and technophobia. Chapters One and Two explore how the supposed ease and speed of reading and writing promised by proficiency in computer use must be balanced against users' dim awareness of that machine's complex technological processes, as individuals learn to navigate functions whose underlying workings evade personal comprehension or control. In Chapters Three and Four, I move to consider the rise of the World Wide Web, again from the viewpoint of those who were unfamiliar or uncertain about the attendant cultural and technological changes.

Finally, a note on my use of terms and terminology in this thesis. In *The Self Wired*, Yaszek finds that “[l]iterary analyses often focus on understandings and representations of only one technology, such as ‘the computer’” (Yaszek 4). For Yaszek, this is problematic since it tends to “imply that all advanced technologies are essentially interchangeable and that they operate on the contemporary imagination in the same ways” (Yaszek 4). Landauer invokes earlier examples of technological innovations to illustrate the flaws in this tendency:

It is a mistake to view the computer as a single technology. More appropriately, each major application is a new technology harnessing information processing capability, much as the electric motor, the locomotive, and the jet plane all harnessed energy-transforming capability. (Landauer 104)

While it is not my intention to generalise about technologies and technological objects, I do refer to the “personal computer” as a single technology throughout this thesis. Since I am seeking to trace a number of responses which conceive the personal computer as an object and conduit for literary experimentation, I do not consider this a mistaken generalisation. By “personal computer,” I mean to indicate a computing device – laptop or desktop – used in a domestic context, for personal exploration and satisfaction rather than in an office or other institutional environment. My references to “the computer” are not intended to stand as cipher for other computational devices, and do not claim to be exemplary of an undifferentiated mass of “advanced technologies”.

Another possible source of confusion is the plethora of descriptors used to define literary works published in a variety of digital formats. Robert Simanowski lists an impressive array of terms when he expresses his admiration for van Looy and Baetens’ reluctance to enter a debate over “whether we should be talking about digital, electronic, interactive, ergodic, hypertext, Net, cyber, or code literature” (Simanowski 28). Simanowski questions the usefulness of the commonly adopted criteria of “the necessity of digital media” (33), noting that the work of Young-Hae Chang Heavy Industries would not fit this description since they do not “really need the digital medium” (Ibid). Since my interest in these texts is based on their description of encounters with technological media, rather than exclusively focused on their formal use of it, I am reluctant to enter into a debate about definitions. To maintain clarity, I have tended to adopt the term preferred by the artist or author and/or most prevalent during the time of the piece’s release. Thus I refer to “electronic literature” in Chapter Two when referring to “Agrippa” and *Patchwork Girl*, but pick up YHCHI’s preference for “Net art” and “digital poetry” in my discussion of their works in Chapter Four. Similarly, my predominant reference to “the Web” throughout this thesis aims to standardise multiple descriptors – “cyberspace”, “net”, “internet”, “World Wide Web” – without being excessively prescriptive. For example, where I have referred to “cyberspace”, it is in response to a direct quotation and usually intended to indicate the legacy of Gibson’s concept of cyberspace or 1990s debates about virtual realities and the experience of “being online.”

CHAPTER 1: WORD PROCESSING POWER

In his 1962 essay “Hazards of Prophecy: The Failure of Imagination”, the science fiction novelist Arthur C. Clarke famously stated that “any sufficiently advanced technology is indistinguishable from magic” (Clarke 1). Nearly forty years later, Clarke cited desktop word processing as his favourite contemporary example of this “third law”, suggesting that the capabilities offered by modern word processing software constitute a truly startling technological development:

[I]f anyone had told me, in 1962, that one day there would be book-sized objects that would hold the contents of an entire library, I would have believed them. But if they had said that I could find any page—or even word—in an instant, and then display it in scores of different typefaces ranging from Albertus Extra Bold to Zurich Calligraphic, any font size from 8 to 72, I would have protested that no imaginable technology could perform such a feat. I can still remember seeing—and hearing!—Linotype machines slowly converting molten lead into front pages that required two strong men to lift them. Now, of course, Microsoft Word performs far greater miracles, every day, in millions of homes all over the world. (Clarke 1)

To illustrate his wonder at the daily “miracles” performed by Microsoft Word, Clarke contrasts the ease and speed of contemporary desktop word processing with the heavy machinery previously required to reproduce print-published texts. In this account, the move away from industrial machinery is accompanied by an impression of increased ease and accessibility: Clarke finds himself thrilled by the apparent instantaneity of the search function, and the ability to alter the aesthetic appearance of a text destined for publication by altering font size, typography, visual display, all “in an instant”. Clarke’s emphasis on ease, speed, and “every day” availability positions word processing as a revolutionary technology, facilitated by the variety of options offered within the software environment. He argues that the locus of control over aesthetic attributes has shifted from the necessity of a specialised industrial environment to the domestic space, becoming a function performed in “millions of homes all over the world”.

In the late 1980s, the poet Kamau Brathwaite became similarly enthralled by the possibilities of word processing software. Brathwaite's approach to word processing provides a vivid introduction to the use of new software for literary experimentation in the late 1980s and early 1990s. His enthusiastic comments regarding the impact of word processing on the production of creative texts in the early 1990s anticipate Clarke's sense of the impact of computing software on opportunities for aesthetic manipulation of the written word. Referring to "the miracle of that electronic screen" (Brown, "Interview with Kamau Brathwaite" 86), Brathwaite expresses his personal sense of technological potential by invoking Clarke's idea of "magic" as a metaphor for encounter with unfamiliar advanced technologies. In interviews and commentaries, Brathwaite celebrates the word processor as a way to break down boundaries between written and oral versions of language, and his poetic experiments use this new tool to develop his ideological concerns with the expression of what he terms "nation language" – the cadences and tones of vernacular speech in the Caribbean. His poetic representations also raise issues of accessibility and comprehension, acknowledging that the "miracle" of word processing can seem inaccessible rather than empowering, particularly for inexpert users unfamiliar with information technologies.

I begin this chapter by considering Brathwaite's utopian notions of how the visual display afforded by the "miracle of that electronic screen" might affect the process of writing, with a particular focus on his sense of word processing software's capacity to enable the expression of a distinctive personal voice. In his general view of the empowering qualities of word processing, Brathwaite celebrates the speed and ease of correction made possible by the computer's visual display of text. He argues that this will open up opportunities for self-expression for uncertain or hesitant writers, because "[y]ou don't have to be able to type, you can make mistakes and correct them or leave them, you can see what you hear" (Brown, "Interview with Kamau Brathwaite" 86).¹⁴ However, in addition to this

¹⁴ Brathwaite's enthusiasm for the erasability of text in the word processor contrasts with Charles Bernstein's view in 1984, when he lamented the loss of "the positive value of 'mistakes'" (Bernstein, "Blood on the Cutting Room Floor" 356). Like Brathwaite, however, Bernstein hails word processing as "the most important modern technological development for writing and reading," describing "the combination of inexpensive printing and photocopying with increasingly efficient typewriters/word processors" as "a kind of second Gutenberg Revolution" (Ibid 354)

impression of a more flexible approach to composition enabled by word processing software, Brathwaite also treated the display of words onscreen as an opportunity to craft and manipulate the aesthetic appearance of the text. This led him to experiment with innovative layouts which he named “Sycorax Video Style”, an effort to approximate the many cadences and emphases of oral speech using variations in typography and layout to provide additional texture to his poems’ “visible” words.¹⁵

Brathwaite’s use of the personal computer to produce experimental literary work in the late 1980s and early 1990s appraises the specific qualities of word processing software as a tool for writing and editing text. However, although he is fascinated by the possibilities of what Jay David Bolter terms “electronic writing space” (Bolter, *Writing Space* 1), Brathwaite never considers that the computer’s “writing space” might also become a “reading space”. Instead his interest lies in the capacity to prepare texts for printed publication, with no acknowledgement of the digital environment as a potential new kind of space to share and disseminate writing. As a result, Brathwaite’s comments and representations are particularly attentive to issues of transferral from the electronically mediated domain of his work-in-progress – text displayed and altered upon a computer screen – to a printed manifestation which he always envisages as a material object. Brathwaite’s experimentation with word processing predated the advent of digital commercial printing by several years, a factor which caused tremendous issues when he attempted to transfer his altered texts to the strictures of the traditional printing press. His accounts of publishing his works in the 1990s reveal increasing frustration at the difficult transition from computer-based layout to print-published text, while his poems and commentaries offer an emotive perspective on the pitfalls and possibilities of this process. His work therefore provides a fascinating insight into the disjunction between the promise and possibility of experimental work and the practical difficulties encountered when attempting to share the products via conventional publishing methods.

¹⁵ Typographic visibility is also a point of creative potential for the L=A=N=G=U=A=G=E poets; Silliman suggests that “to see one’s text in a new typeface (inevitably asserting different spatio-visual values) is almost as radical a shock as first seeing oneself on film or videotape, or initially hearing one’s voice remarkably other on a tape recorder” (Silliman, *The L=A=N=G=U=A=G=E Book* 63)

Brathwaite's foregrounding of non-expert encounters with computing technologies makes him an unusually engaging figure for the representation of technologies in the final phase of the twentieth century, and his stances on poetry, marginality and computer technology combine to offer a polemical introduction to the interrelation of literature and non-expert technophiles. In particular, I am struck by the way he enthusiastically adopts the viewpoint of an unabashed amateur. Despite his undeniable willingness to experiment with the capacities of new technologies, Brathwaite repeatedly confesses his own relative lack of expertise and understanding of precise functions and processes, describing a technological realm whose usefulness he appreciates, but whose actual functions can appear baffling or incomprehensible. Brathwaite's position as an amateur technophile is crucial to my reading of his engagement with technology in this chapter, and I also consider his representation of encounters with inscrutable or confusing computing systems in more detail in Chapter Two. The poet's effort to depict the difficulties of encountering computing technology as a non-expert user, while still extolling its virtues, is a relatively rare approach among literary commentators in the late 1980s and early 1990s, as Brathwaite's poems and commentaries tread a difficult line between celebrating the capacities of computing technology and acknowledging that the "every day" miracles offered by computing technology are neither accessible nor available to everybody. My reading therefore dwells on the social, economic and political complications adhering to expensive "high" technologies in the context of economically and socially marginalised individuals.

Brathwaite's poetic portrayals of the computer depict a machine whose responsive speed is thrilling, but whose underlying processes are baffling. This finds clearest expression in the power of word-processing articulated in Brathwaite's 1987 poem "X/Self's Xth Letter to the Thirteen Provinces" (henceforth "X/Self's Letter"). Portraying hopes and frustrations regarding the possibilities offered by word processing software, the poem offers a useful starting-point to consider the literary and social impact of non-expert encounters with computing technologies. First published in *X/Self*, the final volume in a trilogy later collected as *Ancestors*, Brathwaite's poem vividly introduces a view of the

computer's empowering potential. "X/Self's Letter" opens with a series of delighted declarations from eponymous narrator "X", who describes an encounter with the possibilities, and problematics, of computing word processing in a poetic "letter" to his mother. For the protagonist "X", the computer is a semi-mystical object, an "obeah blox" whose power and potential delights him. The computer is simultaneously the poem's subject and its "eeeeeeee/lectrical" enabler. Celebrating his new machine, X exults in its speed and responsiveness:

dis obeah blox
get a whole whole para
graph write up &

quick
(Brathwaite, *X/Self* 81)

The narrative unfolds as a partial dialogue, with X's exuberant descriptions occasionally disrupted by the sceptical interjections of his bemused "Mamma". In this account, the computer appears as an object whose capacities affect the letter's interlocutors in starkly different ways: while the poem's protagonist anticipates many of Brathwaite's own comments on the liberating power of computing technology, his mother's doubtful uncertainty provides an important foil to his sweeping enthusiasm. In his portrait of gleeful empowerment, however, X indicates the computer's swift responsiveness by casting it as magical, a charmed "block"/"box" whose powers are aligned with the practice of "obeah". The description of the computer as an "obeah blox" echoes Clarke's "third law", indicating that for X, this particular "advanced technology" is indeed "indistinguishable from magic" (Clarke 1).

The alignment with "obeah" recasts "high" or "advanced" technology, usually associated with Western superpowers, as a rooted material object imbued with a cultural relevance specific to the Caribbean region. Brathwaite's configuration of the computer as "obeah blox" combines his protagonist's sense of delight at the object's seemingly otherworldly properties with a reminder that this

symbol of “Western” power is now being used in a new context. Obeah’s longstanding cultural associations with issues of power and resistance make it a resonant and revealing metaphor to express X’s first impressions of the computer. Loretta Collins suggests that “obeah was, throughout colonial history, an integral source of resistance by enslaved African women,” a cultural practice which “helped enslaved Africans form a sense of Afro-Caribbean identity and spirituality” (Collins, “We Shall All Heal” 148). For Brathwaite, obeah connotes social practice beyond simplistic understandings of “magic”; in *The Folk Culture of the Slaves in Jamaica*, Brathwaite argues that while obeah was “associated in the [white] Jamaican/European mind with superstition, witchcraft, and poison,” in “African/Caribbean folk practice... the obeah-man [sic] was doctor, philosopher, and priest” (*Folk Culture* 12). This commentary opens up a range of associations for the computer as “obeah blox”, not only cast as a form of access to power but also a tool whose mysterious workings might include instruction and healing. X’s delight is partly based in the satisfyingly “quick” speed of constructing a paragraph, but he is also thrilled by the ease of correction of his erasable, rewritable on-screen text. In a poem scattered with references to difficulty and failure, the computer’s capacity to invisibly “forget” past errors is crucial for X’s developing sense of self. When he contrasts the computer with his mother’s unused typewriter, consigned to the top of a wardrobe “ketchin duss”, X emphasises the capacity to erase evidence of past errors. Unlike the typewriter, he informs his mother, on his computer there is no need to laboriously correct errors: “yu na ave to benn down over & out / off de mistake” (*X/Self* 81).

The characterisation of word processing software in “X/Self’s Letter” captures a particular historical and cultural moment in the development of computing technology. Although word processing was by no means a brand-new invention when Brathwaite published the first version of “X/Self’s Letter”, the ease and flexibility conveyed in the poem’s account of the computer as a swiftly responsive “obeah blox” was an emphatically new phenomenon; there is very little trace of X’s impression of speed and accessibility in earlier accounts of writing on a computer. In 1987, the year Brathwaite’s poem was published, systems and software were adapting rapidly, and word processing capacities were among the

most swiftly changing aspects of personal computing. A changing rhetoric of expertise and accessibility relating to personal computers was reflected in the text of Apple's 1984 advertising material, which attempted to dismiss impressions of exclusivity and proficiency previously attached to computing technology; the 128k Macintosh was introduced as "the computer for the rest of us" (Franzen and Moriarty, *The Science and Art of Branding* 295).¹⁶ The introduction of the innovative Macintosh 128k was the first successful step in a move away from traditional command-line operating systems to Graphical User Interface (GUI) displays, which replaced textual commands with more instinctively comprehensible icon-based displays.¹⁷

The changing emphasis on needs for "expertise" in popular rhetoric around computing technologies can be traced in reviews and anecdotal memoirs of word processing software in the 1970s and early 1980s, which describe the difficulties of becoming proficient with computing technology. In the years preceding amateur X's delighted discovery that you can "get a whole whole para | write up & || quick", word processing was frequently described as an activity whose complex stages must be painstakingly mastered. A 1982 review of software for the Atari computer explains that the reviewer's learning curve involved "a dozen sessions of one or two hours each to reach the point of actually composing on the keyboard with some confidence" (DeWitt, "Atari Word Processor" 33). Though the reviewer notes that the "frustrations" of this gradual progress are a price worth paying to acquire "skill with a powerful new tool" (Ibid.), his review captures the "disconcerting" effort of grappling with this early manifestation of the electronic page:

Most of the time you spend using the Atari Word Processor is spent working in the "window" area of the electronic page. This can be disconcerting to people accustomed to using typewriters, because

¹⁶ Discussing the success of this branding, Sherry Turkle comments that "[i]ndividuals want to deal with technology that makes them feel comfortable and reflects their personal styles" (Turkle, *Life on the Screen* 41). "By the 1990s," she observes, "most of the computers sold were MS-Dos machines with an iconic Windows interface to the bare machine below—a 'Macintosh simulator'" (Ibid.). As I discuss in the next chapter, the advance in accessibility of personal computing was heavily influenced by the development of icon-based layout for operating systems pioneered by the Apple Macintosh in 1984.

¹⁷ The 1984 Macintosh 128k was not the first machine to use a GUI – that was the Apple Lisa of the previous year. However the Lisa's slow processing and high cost meant that it was neither popular nor commercially viable.

most of the page is not in view. The window is 20 characters wide and 20 characters long (a “screenfull”). The electronic page can be as wide as 121 characters and have up to 200 lines! The window moves (and can be moved) around the page as work is done, but you can never view the whole page at one time. The “layout display” compensates somewhat for this inconvenience. A single, simple command switches the screen from the window mode to a spreadsheet type of display that is a graphic representation of the electronic page in miniature. You can’t read the text on the layout display because each character is represented by only an electronic dot, a word by a line of dots and a sentence by a series of lines. (DeWitt, “Atari Word Processor” 32)

The above account emphasises the disorienting limitations of many examples of early word processing software, whether due to the restricted spatial view of the “electronic page”, the substitution of interpretable characters with electronic dots in an inadequate approximation of visual layout, or the minuscule “window” view of writing in progress. Dennis Baron echoes this impression when he recalls that “printed versions of text seldom matched what was on the computer screen, turning page design into a laborious trial-and-error session” (Baron, “From Pencils to Pixels” 27).¹⁸ Baron adds that such glitches and frustrations meant that “[o]nly die-hards and visionaries considered computer word processing worth pursuing” (Ibid.).

Despite the reservations outlined above, descriptions of encounters with early word processing software still anticipated the rhetoric of ease and speed exemplified in “X/Self’s Letter”. Though the product sounds frankly unappealing, the Atari review attempts to reassure its audience that the software is simple to use. The spectacularly uninformative screenful of electronic dots at least has the benefit of being accessed by a “single, simple command”, while the reviewer explains that the system eventually “accepted” his writing “as easily as paper” (DeWitt, “Atari Word Processor” 33). The reader is also reminded that “[e]asy correction of text is one of the main attractions of word processing” (Ibid). Baron concurs that the presentation of “clean copy” on the electronic page was a vital attraction of early word processing software:

¹⁸ The importance of ease of use, for readers as well as writers, is evident in Vandendorpe’s comment that “For quite a few years the computer did not look like a real rival of the printed book, a fact that was partly due to the poor quality of monitors at the time. This situation began to change with the massive adoption of the web in the mid-1990s” (Vandendorpe, “Reading on Screen” 205).

What made it easy to ignore the computer's many shortcomings was the fact that writing with a PC offered writers something that typewriters could not: the ability to cut and paste, to revise and correct, to make change after change in the text, and, extraneous codes notwithstanding, still have clean copy staring back at them from the screen or, better yet, from the printed page. The ease of revision was what really made the first computer writers put up with a steep learning curve and all the false starts and instabilities that go with any new technology. (Baron, *A Better Pencil* 109)

Despite the appeals of this ease of revision, Baron argues that “most writers” took a pragmatic approach: “[t]hey waited until the process got easier still” (Baron, *A Better Pencil* 109). In Baron's opinion, the recipe for finding word processing “easier” depended on displaying text in a more familiar visual format. He argues that word processing software did not become popular for common use until systems could allow users to “create on-screen documents that looked and felt like the old, familiar documents they were used to creating on electric typewriters” (Baron, “From Pencils to Pixels” 28). Just as Baron argues that writing onscreen became more popular when the visuals began to seem closer to the “familiar” page, X explains his encounter with the computer by invoking imagery of familiar objects. Throughout “X/Self's Letter”, technology is described via analogies with solid objects and comparisons with conventional processes of inscription. X's reference to the typewriter “ketchin duss” on top of his mother's cupboard, denigrates the familiar object in order to reaffirm his belief in the computer's power and flexibility.

As these brief accounts demonstrate, Brathwaite's interest in computers and poetic expression is situated at a crucial phase of technological transition, capturing a moment when users' experience moved from the estrangement and difficulty generally anticipated in word processing software of the early 1980s, to the perceived ease and instantaneity afforded by advances in the late 1980s and early 1990s. Though Brathwaite expresses his enthusiasm for the apparent flexibility and malleability of text rendered on a computer screen, others saw dangers in it. Setting up a binary between fixed material objects and ephemeral “virtual” texts, in his *Gutenberg Elegies* Sven Birkerts contrasts the “permanence” of words “imprinted on paper” with the “provisionality” of onscreen text:

To make a mark on a page is to gesture toward permanence; it is to make a choice from an array of expressive possibilities. In former days, the writer, en route to a product that could be edited, typeset, and more or less permanently imprinted on paper, wrestled incessantly with this primary attribute of the medium. If he wrote with pencil or pen, then he had to erase or scratch out his mistakes; if he typed, then he either had to retype or use some correcting tool. [...] This ever-present awareness of fixity, of indelibility, is no longer so pressing a part of the writer's daily struggle. That is, the writing technology no longer enforces it. Words now arrive onto the screen under the aspect of provisionality. They can be transferred with a stroke or deleted altogether. And when they are deleted it is as if they had never been. There is no physical reminder of the wrong turn, the failure. (Birkerts, *Gutenberg Elegies* 157)

Though he acknowledges that “to theorize along these lines is to court ridicule,” Birkerts speculates that the “aspect of provisionality” he perceives in the act of arranging words onscreen means that “the consequentiality of bringing forth language has been altered” (Ibid). Though subsequent theorists have critiqued the opposition of “fixed” print and “volatile” electronic texts assumed in Birkerts’s statement, Birkerts’ account neatly summarises the perceived qualities of “onscreen” text widespread in accounts of word processing in the late 1980s and early 1990s.¹⁹

Regarding the “provisionality” of electronic text, Birkerts does acknowledge the appeal of being “freed” to rearrange sentences “with less inhibition” (Birkerts, *Gutenberg Elegies* 158). However, he fears that such freedom “promotes process over product” (Ibid.). For Brathwaite, by contrast, the prospect of being able to write and rewrite with “no physical reminder of the wrong turn” offers a newly receptive space for creative experimentation, where the emphasis of process over product is itself a creative statement. Birkerts’s impression of “electronic writing space” as an environment defined in terms of its flexible malleability is shared by both detractors and enthusiasts; what differs is their sense – often depending on personal ideology and experience – of the impact these qualities might have for

¹⁹ Matthew Kirschenbaum describes this perception of electronic text as symptomatic of a “medial ideology,” which places excessive emphasis on the visible evidence onscreen and therefore ignores the actual inscriptive process (*Mechanisms* 43). I discuss this factor in more detail in Chapter Two.

writing projects in the future. Though Birkerts and Brathwaite reach significantly different conclusions, there is a striking similarity in the perceived function and impact of word processing found in their commentaries. The aspects of computing which Birkerts considers fearful and potentially damaging are those which thrill Brathwaite with possibilities for the future, a factor most evident in each writer's emphasis on the ease of correction permitted by texts' malleability onscreen. Where Birkerts fears lack of concentration and unity, Brathwaite sees the possibility for freer self-expression, whose processes and cadences are closer to the oral performance which he considers crucial to expression in the Caribbean region. For Birkerts, such "provisionality" discourages careful thought and planning, aspects which he considers integral to the craftsmanship of accomplished literature – the kind of craftsmanship he praises in the poet Derek Walcott, whom he describes as a "master". Brathwaite, on the other hand, celebrates the swift erasability of text for his idea that it may empower uncertain or inexperienced writers to express themselves with greater ease and proficiency. Sharing the viewpoint of technological non-experts, Birkerts and Brathwaite perceive similar qualities adhering to electronic text, but in each case the qualities of word processing reflect their differing views and judgements about the purpose and value of literary writing.

Birkerts considers writing on the computer to be fundamentally in opposition to a traditional "craftsmanship" of writing. He argues that "verbal perfectability, style, and the idea of ownership" arose with the capacity to craft "words on the page, chiseled and refined by a single author" which "aspired to permanence" (Birkerts 159). For Birkerts, permanence is a signifier of quality and he repeatedly rephrases his opinion that "the printed page was an objective, immutable thing; the book was an artefact" (Ibid). Brathwaite's celebration of the swift erasability of writing in the word processor initially appears in direct opposition to this valorisation of a perceived permanence and fixity. However, at the conclusion of "X/Self's Letter", the poem shifts from analogies of speed and movement to compare the computer screen with a "stone / face" onto which X figuratively chisels his poem:

a sittin down here in front a dis stone
face/eeee
lectrical mallet into me
fist
chipp/in dis poem onta dis tablet
chiss/ellin darkness writin in light
(Brathwaite, *X/Self* 81)

Charles Pollard observes that “Brathwaite seems drawn to the computer because it enables him to emulate his model figure for the artist, the carpenter/sculptor” (Pollard 126), and this is exemplified in the metaphorical synthesis of X as typist/craftsman. Here Brathwaite replaces the poem’s earlier metaphors for swift movement with imagery imbued with impressions of solidity; the physicality of the fist clenched around a computer mouse, itself recast as an “eeee/lectrical mallet”, contributes to a sense of technology as a form of access to power. The conclusion invokes analogies with craft and craftsmanship; X’s reference to the screen as “dis tablet” references one of the oldest and most materially permanent instances of inscription as an analogy for his technologised writing process.

Pollard adds that in the ending to “X/Self’s Letter”, Brathwaite seeks to compare “the writing of this poem... to the carving of the Ten Commandments in stone” (Pollard 128), and asserts that “in doing so, Brathwaite makes clear the scope of his public ambition”.²⁰ The biblical precedents for X’s stone tablet – “like moses or aaron or one a dem dyaaam isra | lite” (Brathwaite, *X/Self* 87) – indicate the weighty cultural resonances of Brathwaite’s concluding metaphor for the computer screen. Jason Farman suggests that “[c]ultural value is often attributed to the source and durability of a message” (Farman, *Mobile Interface Theory* 121), and as Shelley’s poem “Ozymandias” mockingly reaffirms, the stone engraving is a

²⁰ Pollard’s commentary involves a slight misreading of Brathwaite’s poem, since he interprets the lines as a direct statement about Brathwaite’s later development of what he calls “Sycorax Video Style”, an aesthetic mode which endeavours to capture the cadences and uneven rhythms of oral speech by typographical experimentation. In fact the poem “X/Self’s Letter” predates Brathwaite’s development of Sycorax Video Style by several years – Brathwaite did not begin to experiment with the aesthetic possibilities afforded by word processing until the early 1990s. Nicholas Laughlin sets the first instance of Sycorax Video Style at the publication of *DreamStories* in 1994 (“Notes on Videolectics”, *Caribbean Review of Books* 2007 n.pag.), the first publication was actually 1993’s *Middle Passages*.

mode of inscription guaranteed to outlive its scribe (unless it falls prey to catastrophe or deliberate destruction).²¹ Brathwaite's choice of metaphor at the poem's conclusion figuratively endows computer-based text with aspects of intransient solidity and authority. In doing so, the poem's final lines complicate the valorisation of electronic text's flexible malleability, speed and ephemerality earlier in the poem. Indeed, fixity and transience co-exist at the end of "X/Self's Letter": though the act of inscription is rendered visceral by the action of "chippin" and "chissellin", the solidity of the screen-as-tablet is still juxtaposed with the suggestive ephemerality of "writin in light" (Brathwaite, *X/Self* 81).

Amidst the conflation of stone and light which concludes "X/Self's Letter", the writer is cast as both craftsman and experimenter. The process of electronic inscription in this poem is endowed with a dual power. Though its flexibility makes it accessible to non-'X/perts', the portrayal in "X/Self's Letter" refuses to comply with the dire interpretation of the effects of "provisionality" and transience found, for example, in Sven Birkerts' account of electronic writing. When X envisages his poem/letter as an act of chiselled craftsmanship, the metaphor of the stone tablet is used to clarify his writing's status as an act of determined and thoughtful inscription. This act of inscription is aligned with X's increased sense of his "Self" as a significant being, a "somebody" or "something":

like i is a some/ is a some

body/ a

x

pert or some

thing

(Brathwaite, *X/Self* 81)

²¹ Farman's perception of stone inscription as "marked by those with wealth and authority" (Ibid.) is supported by McCullough's suggestion that "most lasting inscriptions came from positions of authority, which of course had the most means to leave lasting traces" (McCullough, "Epigraphy and the Public Library" 61). Durable inscription has a long history in artistic creation; as Donaldson notes, "In a literate society, one of the great incentives to writing is the thought that such work will survive longer than the writer himself: survive not simply in the minds of others, but as a tangible object, a manuscript, a book." (Donaldson, "The Destruction of the Book" 4)

It is no accident that X's self-affirmation comes directly after the reference to the screen as stone tablet, and that this moment also coincides with the first point at which X's "letter" is referred to as "poem". X's newfound certainty of self-expression is portrayed through his writing's alignment with an act of carving or chiselling, in opposition to the transient activity of typing. By conjuring the screen as stone tablet, X aligns his own act of electric inscription with the "durability" of an act of official inscription usually "marked by those with wealth and authority" (Farman 121). In doing so, the poem rejects the association of writing on screen with "provisionality" suggested by Birkerts.

The above interpretation of "X/Self's Letter" assumes a certain status which accrues to crafted, physically intransient acts of inscription. By comparing typing onscreen with stone engraving, Brathwaite's poem appears to invite approval from cultural interpretations which privilege craftsmanship and longevity. This reflects the poet's broader interest in acts of material inscription: although Brathwaite conceives his poems as malleable texts while they remain onscreen, he repeatedly states his assumption that they will eventually be published as print-bound works.²² As a result, qualities of flexibility and malleability are treated as a useful means to produce a more finely "chiselled" finished product, rather than an end-result in itself. In the first edition of *Writing Space*, published in 1991, Jay Bolter suggests that "the behaviour of the writing space becomes a metaphor for the human mind":

With any technique of writing—on stone or clay, on papyrus or paper, and on the computer screen—the writer may come to regard the mind itself as a writing space. The behaviour of the writing space becomes a metaphor for the human mind [...] Such cultural metaphors are in general redefinitions of earlier metaphors, so that in examining the history of writing, and in particular electronic writing today, we should always ask: How does this writing space refashion its predecessor? How does it claim to improve on print's ability to make our thoughts visible and to constitute the lines of communication for our society? (Bolter, *Writing Space* 1)

²² Brathwaite's attachment to print publication is made clear in his complaints, discussed later in this chapter, at the difficulties of publishing his more formally experimental poems. See *ConVERSations with Nathaniel Mackey*, pp. 167-8.

If “writing space” can be considered a “metaphor for the human mind”, then the figurative transformation of screen to stone in “X/Self’s Letter” might represent a psychological shift from X’s initial uncertainty about his own capacities for self-expression, to the confidence expressed in his assertion that he feels like “a x/pert or something”. However, Brathwaite’s view of electronic writing never seeks to “refashion” its predecessor in the radical sense invited by Bolter’s comments on “writing space”. Always anticipating a return to the physical materiality of print publication, Brathwaite’s texts aim to redeploy ideas associated with earlier, traditional, forms of inscription in a new technological context, but do not seek to enter a new phase in “the history of writing” (Bolter 1).

When Bolter considers the process of writing in “electronic space”, he does so by comparing it with established modes of inscription – a strategy already familiar from the imagery of Brathwaite’s poem. Emphasising the flexibility of screen-based writing, Bolter suggests that “[e]lectronic writing shares with the wax tablet or chalkboard the quality of rapid and easy change” (Bolter, *Writing Space* 14). Bolter’s first edition of *Writing Space* proposed the aspects of “flexibility” and “erasability” as a crucial defining factor when considering the computer as a writing tool. When he defines the distinctive qualities of the new “electronic writing space,” Bolter notes that it is “malleable in the hands of both writer and reader” (12). These notions of flexibility and speed align with Brathwaite’s portrayal of creative composition on the computer, revealing an emphasis on the qualities of the computer as a “provisional” space for writing and rewriting. However, unlike Brathwaite, Bolter’s assumption of screen-based reading for digitally produced texts promotes an assumption that printing will swiftly become unnecessary in a newly technologised approach to literature. Like Clarke and Birkerts, he considers this a revolution available to anyone, and exults in the potential for new and experimental means of conveying written words.

Bolter does not pause to consider the practicalities of access or accessibility. Yet Brathwaite’s poem is also alert to the problematics of access to this new technology, in ways ignored by the US-centric valorisation of “writing space” offered by Bolter and others. As X commences his letter, the first few lines

combine the excitement of new discovery with acknowledgement that his new machine hails from a social, economic and political environment to which he does not feel immediately entitled:

guess what! pun a computer o/kay?
like i jine de mercantilists!

well not quite!

(Brathwaite, *X/Self* 80)

In Brathwaite's lexicon, the term "mercantilist" refers to a history of economic and social exploitation. Referring to the origins of "mercantilism" in 16th and 17th Century economic theory, Charles Wilson defines it as "the pursuit of power and the accumulation of treasure" (Wilson, *Mercantilism* 8). In Brathwaite's writing, this impulse is always associated with European, or European-influenced, economic powers, where "mercantilists" exemplify domineering opposition to expressions of arts and culture. A gloss in Brathwaite's accompanying notes in the first edition of *X/Self* cites "the Euroimperialist/Christine mercantilist aspect" of world history (Brathwaite, *X/Self* 125), while his essay "The African Presence in Caribbean Literature" attributes the "success of the Haitian Revolution" to "a triumph of Afro-Caribbean folk arts and culture over European mercantilism" (Brathwaite, "African Presence" 193).

The complexity of X's relation to advanced technologies becomes evident in a series of comparisons which indicate processes of exchange and appropriation in the relationship of technology and "mercantilist" cultures. X's insistence that he has "not quite" joined the mercantilists implies his intention to adapt this technology for his own creative purposes, undaunted by its assumed association with dominant economic and political powers. In "X/Self's Letter", X's encounter with the personal computer is repeatedly aligned with instances of appropriation of non-Western scientific and cultural products by Western powers. He begins by comparing his use of the computer with the "thieving" of other cultures' innovations by "mercantilist" powers, citing one technological and one artistic example when he compares his own act of appropriation to Western adoption of

gunpowder and the blues: “de same way dem tief/in gun // power from sheena & taken we blues” (80). Flamboyantly conflating multinational tech companies with a classical Roman poet, X explains that his personal computer “is not one a dem pensive tings like ibm nor bang & ovid / nor anyting glori.ous like dat!”. Yet despite ostensibly distancing his own relatively humble manifestation of advanced technology from “glori.ous” examples happening elsewhere, X immediately boasts that his computer is “de best ting since cicero” (80). The references to “bang & ovid” and “cicero” evoke associations with classical Rome developed throughout the collection of poems in *X/Self*, where Rome functions as archetypal figure for Western/”mercantilist” imperialism.

Arguing that Brathwaite portrays capitalism as “a malign machine entombed in Mont Blanc,” Emily Greenwood cites Brathwaite’s reference to “the Euroimperialist/Christine mercantilist aspect” of world history (Greenwood 245). This conflation of Rome, Europe, mercantilism and capitalism in the imagery of the industrial “machine” certainly informs X’s classically-inflected descriptions of technology at the start of “X/Self’s Letter”. Greenwood finds that imperial Rome takes on a symbolic status throughout *X/Self* as “a locus of conquering power, and as such becomes a byword for imperial conquest” (Greenwood 244). In the context of Rome’s role as cipher for imperial systems throughout *X/Self*, the conflation of classical figures with technological processes – for example, the declaration that the computer is “de best ting since cicero” – reaffirms technology’s association with the “mercantilist” domain of “Euroimperialism”. Nor is Rome the only example of a “locus of conquering power” used as a point of comparison in Brathwaite’s poem. Throughout “X/Self’s Letter”, X’s description of encountering the computer is dominated by a mixture of celebrated cultural figures and distant technological objects, each of which are used to illustrate power and expertise.

Greenwood suggests that Brathwaite’s shifting narrative perspectives in *X/Self* maintain “a subtle equilibrium between being both in and out of Rome” (Greenwood 244), and X’s references to celebrity figures seize upon a similarly ambivalent relation to centralising powers. When X concedes that he is no expert

in using the computer, he does so by comparing his own facility with the keyboard with famous individuals associated with speed and skill. He explains that he cannot “flat | foot pun de key | boards” like Charlie Chaplin, far less “touch | tapp/in like | bo/ | jangles || walk/in | down chauncery | lane” (83). Both these examples achieved success against the odds, Chaplin escaping from extreme poverty and African American tap dancer Bill “Bojangles” Robinson overcoming racial prejudice to become the first black dancer accepted in Hollywood. Both comparisons emphasise X’s alignment with cultural icons who have existed “both in and out of” a locus of power. The case of “Bojangles” is a particularly apt comparison; Henry Louis Gates describes Bill Robinson as “the premier African-American dancer of the day... remembered not only for his own extraordinary talent, but because he was able to ‘cross over’” (Gates 148):

Not unlike other key figures, he moved across the line separating the black world from the white, bringing with him the genius of black culture, but modified in ways that made it comprehensible and appealing to white people. ... He was democracy in action—improvisational, flexible, fluid, protean, and experimental with and on his feet. (Gates 148)

It is no coincidence that Gates’ adjectives describing Robinson – “flexible”, “fluid”, “protean”, “experimental” – echo the qualities ascribed to electronic text in “X/Self’s Letter” and elsewhere. Bojangles’ physical dexterity and flexibility is included as a suggestive symbol of these qualities attributed to the “electronic text”, representing the swift capabilities which X aspires to achieve via his interaction with computing technology. However there are more controversial aspects to this “toe-tapping” characterisation. Gates adds that Bill Robinson’s position as acclaimed ‘minstrel’ within the Hollywood establishment prompted criticism for “his smiling, childlike, fawning behavior to whites”, and particularly for “assigning credit to white people as originators of his dances” (149). This unequal assignment of credit resonates with Brathwaite’s earlier reference to cultural appropriation in the “theft” of gunpowder and the blues, and the comparison implies potential pitfalls in X’s own act of appropriation.

Robinson's precarious position as acclaimed 'minstrel' within the celebrity establishment of all-white Hollywood makes him a complex reference-point for X's portrayal of his own attempts to adopt computing technology without "crossing over" to "jine the mercantilists". X is very clear that he is not "touch | tapp/in like | bo/ | jangles" (Brathwaite, *X/Self* 83). Instead, X proudly announces that he "mwangles!", creatively reconfiguring the process in which he is engaged. Nor is Bill "Bojangles" Robinson the only example invoked as a standard whose level of accomplishment X aspires to imitate, but whose capabilities prompt a sanguine evaluation of his own comparative lack of expertise. As with the celebrity figures, X's enthusiasm for his grasp of technology is expressed via his contemplation of distant technological objects, each presented as exemplary of the power and potential of the processes he is beginning to "mwangle". In addition to the specific local qualities of the computer on which he types – its keyboard, mouse and screen – "X/Self's Letter" offers a stream of comparisons with famous examples of technological prowess. As with "Bojangles", however, X distinguishes between his own capacities and those of the advanced technologies he admires:

a mean
a nat farwardin wid star
wars
nor sing
songing bionic
songs or like sputnik &
chips
goin bleep bleep bleep bleep bleep bleep into de peloponnesian
wars

but i
mwangles...
(Brathwaite, *X/Self* 83-4)

In addition to expressing X's human limitations – not “touch-tapp/in”, not “farwardin wid star | wars”, not “sing | songing bionic | songs” – the above quotation establishes a further set of cultural referents for X's encounter with technology. Building on earlier lists, which include “dat indonesia fella in star | trick” and X's confession that “a doan know how pascal & co | balt & apple & cogito ergo sum | come to hinvent all these tings” (82), the technological objects and processes cited in “X/Self's Letter” are, without exception, the products of American or European-dominated institutions. As such, they are portrayed as exemplars which X admires from afar, simultaneously contrasted and compared with the more personal technology at his fingertips.

X's status as an amateur user of advanced technologies prompts him to a type of appropriation which is also a creative reimagining, as he exults in his capacities to “mwangle” (manage/mangle) the versions of “high” tech he encounters in the computer. In the 1972 essay “Technology and Ethos,” poet Amiri Baraka encourages “Black creation—creation powered by the Black ethos,” stating that “political power is *also* the power to create” (155, original emphasis). Baraka argues that the “technology of the West” is shaped and constructed in the visual and verbal language of dominating powers:

Machines, the entire technology of the West, is just that, the technology of the West. Nothing *has* to look and function the way it does. The Western man's freedom, unscientifically got at the expense of the rest of the world's people, has allowed him to expand his mind—spread his sensibility where it cd go, & so *shaped* the word, & its powerful artifact-engines. (155)

Responding to the perceived spread of an exclusively “Western” design and functionality, Baraka presents a view of Western technological supremacy in which technology is tainted by its status as the “powerful artifact-engine” of colonial and neo-colonial domination. Because the computer is an object constructed as a result of technological innovations largely (though not exclusively) dominated by the West, it is implicitly contained within the design and structure of an exploitative economic hierarchy. Brathwaite's representation in “X/Self's Letter” shares Baraka's sense of the uneven hierarchies adhering to “the

technology of the West”, associating the freedoms afforded by advanced technologies with developments made at the “expense of the rest of the world’s people”. However it also responds to Baraka’s exhortation to empowerment achieved through “Black creation”. X’s interaction with technology is dominated by recognition of the potential power of his new form of self-expression, and the poem is spliced with imagery of cultural appropriation in which X suggests that his adoption of “Western” technology inverts a history of Western exploitation. Acknowledging the racially and economically drawn lines of the technology described in the poem, “X/Self’s Letter” reaffirms conventional associations of “advanced” technology with “white” power.

Though it is the most sustained consideration of computing technology, “X/Self’s Letter” is by no means the only example of these factors in Brathwaite’s oeuvre. The earlier poem “Negus” takes imagery of advanced technology – flights, architecture, television – to draw attention to the continuing marginalisation of peoples of African descent. “[I]t is not enough to be free”, Brathwaite declares in “Negus”, “of the whips, principalities and powers” (Brathwaite, “Negus” 131). In “Negus”, use of the machinic technology of the bicycle contrasts with the advanced technology of the “fourteen-inch screen” of a television set:

It is not enough
to tinkle to work on a bicycle bell
when hell
crackles and burns in the fourteen-inch screen of the Jap
of the Jap of the Japanese-constructed
United—Fruit-Company-imported
hard sell, tell tale tele-
vision set
[...]
it is not enough
to be able to fly to Miami,
structure skyscrapers, excavate the moon-

scaped seashore sands
to build hotels, casinos, sepulchres
(Brathwaite, "Negus" 131)

In "Negus", as with "X/Self's Letter", advanced technology is associated with distant powers. Yet the poem does not suggest that a solution lies with greater access to these technological delights. Instead, it asks "where is your kingdom of the Word?", declaring that the poet "must be given words to refashion futures | like a healer's hand" (Ibid). Although Baraka and Brathwaite both decry uneven hierarchies of technology and power, they also suggest that these hierarchies can be challenged by creative acts which reimagine technologies in ways which are relevant to formerly marginalised users. X may not be altering the technology itself as he "mwangles", but his appropriation of the computer's word processing power for his own expressive purposes represents a clear attempt to use the opportunity afforded by this "technology of the West" in order to "spread his sensibility" (Baraka 155).

Critical interpretations are not always convinced by Brathwaite's attempt to reconfigure computing technology as a tool for black self-expression. Charles Pollard sees Brathwaite's interest in using the computer as an "anomaly" emerging "out of a computer technology that is removed from the popular culture of the Afro-Caribbean folk" (Pollard 126). Discussing literary iterations of Shakespeare's character Caliban in her book *Caliban in Exile*, Margaret Paul Joseph offers a misguided description of "X/Self's Letter" as a "political satire" in which X appears as "a pathetic rather than a positive figure" (Joseph 14). Joseph interprets the poem as a simple successor to Brathwaite's earlier poem, "Caliban", and treats X as a straightforward cipher for Shakespeare's character in *The Tempest*:

Caliban uses a computer in X/Self to write a letter to his mother. He tries hard to be modern and learn Prospero's new technical languages. But even as he does so, he anticipates a day when [End 14] Prospero will destroy himself, perhaps by his own technology. And if that happens, Caliban will disclaim any responsibility ... [Brathwaite's] Caliban seems to strain too hard to prove himself equal or superior to Prospero. (Joseph 14-15)

In contrast to my argument that the self-confessed limitations of X's computing expertise function as a creative reappropriation of a new technology for innovative self-expression, Joseph argues that the poem's discourse inevitably anticipates failure.²³

The line to which Joseph refers in her claim that "Caliban will disclaim any responsibility" must be X's punning declaration that "nat one a we should responsible if prospero get curse | wid him own | curser" (Brathwaite, *X/Self* 85). However, Joseph's oversimplified reading of X-as-Caliban, and of a disempowerment expressed through refusal of "responsibility", is significantly undermined by the lines preceding this statement in the poem. Here, X asserts that his effort to "learn prospero language" is emphatically distinct from the example of Caliban:

not fe dem/not fe dem
de way caliban
done
but fe we
fe a-we
(Brathwaite, *X/Self* 84-5)

Rather than a strained attempt to prove himself "equal or superior to Prospero" (Joseph 15), X's determination to learn the new "language" of technology is announced here as an act for the benefit of "we" as a separate entity. Jonathan Goldberg finds that "[f]or Brathwaite... resuscitation of African and New World resources is vital" (Goldberg 85), and he reads the above lines as a moment in which "the machine is turned back upon its inventor; *techne* is mined for energies that cannot be controlled by the colonial project" (Goldberg 88). By declaring autonomy from the need to "prove" equivalence, "X/Self's Letter" rejects the idea of an anxious game of catch-up played by an imagined crowd of marginalised late

²³ Others agree with Joseph, though in less dismissive terms. For example Bob Perelman describes *X/Self* as "a conflict between Western values and a nascent Afro-Carib culture Brathwaite wants to articulate" (Perelman, *The Marginalization of Poetry* 92). Simon Gikandi, on the other hand, argues that "for peoples of African and Asian descent, the central categories of European modernism—history, national language, subjectivity—have value only when they are fertilised by figures of the 'other' imagination which colonialism has sought to repress" (Gikandi, *Writing in Limbo* 3-4). Keith Tuma finds that "X/Self is conscious of writing at the beginning of a postcolonial existence, self-aware but not self-assured" (Tuma, *Fishing* 247), adding that "[t]he modern or postmodern Caribbean writer, in his or her hopefulness, must be prepared to appropriate current technologies for Caribbean ends" (Ibid 249)

tech adoptors. Experts in “prospero language” are irrelevant to X, whether or not they find themselves “cursed”. Instead, his interest lies in the potential of this “language” for those still in the process of transforming it for their own purposes.

The unabashed appropriation of the computer in “X/Self’s Letter” counters assumptions that, as Adam Banks puts it, technology is “White by default” (Banks 12). This is precisely the kind of presupposition on display in Josephs’ conviction that X fails to “learn” the “new technological languages”. In Joseph’s analysis, race is treated as a signifier for technological inexpertise and marginality, and X is interpreted as an outsider doomed to “strain too hard” to learn a language he cannot master. Banks attributes the negative aspects of myriad social and cultural factors associated with computing technology to “a history that has branded African American as utter outsiders... because they are non-technological, unable to learn Standard English, in essence, non-citizens” (Banks 12). Banks perceives a hierarchy based on a persistent rhetoric of “exclusion” even amidst the progressive rhetoric of literary and cultural studies:

Neither rhetoric and composition nor the technology sector have found ways to discuss their continued exclusions of Black people, both continuing to define the rhetor and the technology user as White by default. This longstanding theoretical blind spot is especially pronounced in a field like English Studies, where race, technology, and questions of access are all addressed, sometimes even energetically, but where the connections between them are almost never explored. (Banks, *Race, Rhetoric and Technology* 12)

The possibility of making “connections between” race, technology and access, as described by Banks, is explored in the creative interrelation of language, technology and expertise in “X/Self’s Letter”. X’s determination to “master” computing technology for the purposes of self-expression deliberately cuts through assumptions about the “default” characteristics of “the technology user” outlined by Banks. As such, the poem represents an effort to reconfigure racially inflected assumptions, by demanding a reimagination of the relevance of technological advances for black self-expression.

The considerations of a complex relation between race and technology

outlined by Banks and Baraka finds specific terminology in discussions of the “digital divide,” arising in response to the growing popularisation of the Web in the 1990s. Nelson et al define references to a “digital divide” as “popular shorthand for the myriad social and cultural factors that shape access to technological resources” (Hines, Nelson and Tu, “Introduction: Hidden Circuits” 1). With the stark differentials of access to the infrastructure of the “web”, problematics of a “digital divide” became a way of acknowledging the lack of access to technology by individuals in economically and socially marginalised communities. Critical material on the “digital divide” proliferated with the increasing use of the web in America and elsewhere in the mid to late 1990s, and was frequently based in figures demonstrating shortage of access to technologies by economically and racially marginalised communities. Writing in 2001, Logan Hill focused on America to explain that “[m]inorities are still two to three times more likely to lack a simple telephone... African American and Latino households are about half as likely to own a computer at home than whites and Asians” (Hill, “Beyond Access” 13). In 2002 Lisa Nakamura found this an ongoing problem, arguing that “*lack of access* to the Internet—often found along raced, classed, and still, to a narrowing extent, gendered lines—continues to cut particular bodies out of various histories in the making” (Nakamura, *Cybertypes* xii).

Despite the very clear practical basis for these concerns, Hines, Nelson and Tu caution in their introduction to *Technicolor* that “the digital divide has become a self-fulfilling prophecy, confirming that people of color can’t keep pace in a high-tech world that threatens to outstrip them” (Hines, Nelson and Tu, “Introduction: Hidden Circuits” 2). Recalling Banks’s concerns about technology conceived as “White by default”, these concerns that the so-called divide might become a “self-fulfilling prophecy” build on Nelson’s characterisation elsewhere of the digital divide as a “Janus-faced” concept:

Though meant to draw attention to true disparities, the well-meant concept of the digital divide is Janus-faced: there are indeed critical gaps in technological access and computer literacy that are comprehensible through the prisms of race, gender, socioeconomics,

region, and age. Nonetheless, this paradigm is frequently reduced to race alone and thus falls all too easily in stride with preconceived ideas of black technical handicaps and “Western” technological superiority. [...] In these frameworks, the technologically enabled future is by its very nature unmoored from the past and from people of color. Neocritical narratives suggest that it is primitiveness or outmodedness, the obsolescence of something or someone else, that confirms the novel status of the virtual self, the cutting-edge product, or the high-tech society. (Nelson, “Introduction: Future Texts” 5-6)

The determination that discussions of the digital divide should not be “reduced to race alone” prompts Nelson to challenge “preconceived ideas of black technical handicaps” (Ibid). Addressing the connections between “race, technology, and questions of access” (Banks 12), Nelson’s project aims to explore these via more detailed inspection of the “many interfaces where technology and race intersect” (Hines, Nelson and Tu, “Introduction: Hidden Circuits” 1). Examples found in *Technicolor* range from cars to computers and attempts to move away from conventional assumptions of hierarchy between “advanced” technologies. In an interview, Vivek Sand argues that a “‘DIY’ approach to technology has always existed in poor communities, communities of color, Third World communities, out of sheer necessity”. Using the pioneering Jamaican producers Lee “Scratch” Perry and King Tubby as an example, Sand explains that “[w]ith limited resources and limited access, people have been using whatever technology they can get their hands on... and have been pushing it, stretching it, redefining it, and usually getting it to do much more than it was ever meant to do” (Nelson, Sand & Tu, “Appropriating Technology” 89)

Nelson’s comment on the importance of challenging a perceived gap between “obsolescence” and the “novel status of the virtual self” is particularly relevant to “X/Self’s Letter”, where X’s determination to transcend the “outmodedness” of earlier technological forms – paper, the typewriter – appear as a prompt for his determination to master computing technology. Like the producers cited by Sand, X attempts to redefine the technology he uses. In using word processing software to represent the particularities of his speech and

approach, he shuns conventional associations of the computer with technologised discourse. As I have discussed, X's interaction with technology is steeped in his admiration for the speed and power he associates with "high-tech society", exemplified by Sputnik and co, "sing | singing bionic | songs". Yet the "Letter" itself is no "bionic song". Instead, its mode of expression is emphatically rooted in the oral performance of what Brathwaite has termed "Nation Language", and constitutes an early example of Brathwaite's conviction that the particular qualities of word processing on the computer might be used as a way of capturing the speech and cadences of the Caribbean in textual form.²⁴ Though X's interaction with the computer implies his accession to a "technologically enabled future", the machine is nevertheless presented as a tool used to express an emphatic regionalism which is rooted in specifics of place and identity. The poem refutes assumptions that a move into "Western' technological superiority" might inevitably result in an experience "unmoored from the past and from people of color" (Nelson, "Future Texts" 6). Instead, that "technological superiority" is redeployed in order to, as Brathwaite puts it, allow the spoken word to "become visible" (Brown, "Interview with Kamau Brathwaite" 84).

Brathwaite's association of new computing technologies with regional forms of self-expression in "X/Self's Letter" can be traced back to his ideological views expressed in much earlier writings. In his seminal essay *The History of the Voice*, Brathwaite refers to "the very software, in a way, of the language", and his discussion of this linguistic "software" offers a sustained explanation of what he calls "nation language". *The History of the Voice* defines the term nation language as a destigmatised alternative to "dialect", which seeks to describe changes wrought upon a formerly colonial language by the "submerged" presence of suppressed languages imported from other regions as a result of the middle passage. Focusing exclusively on African slaves forcibly shipped to the Caribbean region, Brathwaite argues that "imported," "submerged" languages of enslaved

²⁴ Ulfried Reichardt finds that Brathwaite's concept of nation language is too prescriptive, relying too heavily on "oppositions like those between the North and the South, between the powerful and the powerless... Yet he does not offer an alternative vision. The two main areas he dramatises are the everyday life of black West Indians and the history of colonialism, slavery and racism which, in his view, is still very much inscribed in the actual present on the islands" (315). For a more extended discussion of vernacular and "nation language", see Ahmad, *Rotten English* (2007) and essays in Annie Paul, Ed, *Caribbean Culture: Soundings on Kamau Brathwaite* (2007)

peoples gradually influenced dominant languages through a “complex process” of adaptation and influence (Brathwaite, *History of the Voice* 8). Contrasting the dominant “European” discourse of colonial powers with the “submerged” “African” languages of enslaved peoples, he argues that “underground” patterns of speech gradually altered the “conquering” languages – eventually “influencing the way in which the English, French, Dutch and Spanish spoke their own languages” (Brathwaite, *History of the Voice* 7-8). Brathwaite’s account conflates linguistic and socio-political concerns, so that “nation language” emerges as both testament to an enslaved past, and evidence of the influence of those enslaved on the language of their former masters.

In Brathwaite’s account, the Caribbean is cast as a point of historical intersection between languages and cultures, and “nation language” demonstrates the endurance of “submerged,” suppressed but still surviving languages forcibly “imported” by the traffic of peoples from other areas. In this context, languages are tainted by the actions of those who use them: Brathwaite associates the “language of the conquistador” with imperatives to “obedience” and “command” (*History of the Voice* 8). However, he also suggests that “nation language” offers a third way, creatively synthesising the language of conquistador and slave. Thus the dominant languages, once defined by their role as the expression “of public discourse”, associated with “obedience” and “command” (Ibid.), are recast as evidence of the survival of “submerged” linguistic and cultural forms. Brathwaite finds that nation language has emerged in oral speech, outside the processes of writing, recording and controlled preservation of an “official” language, and insists that this language has been sufficiently transformed in oral speech to transcend its original position as the “language of the Master”. For Brathwaite, this “very complex process” of emergent languages is also “now beginning to surface in our literature” (Ibid.), and he describes its formal and linguistic innovations in strikingly similar terms to those used for the relationship of imported slave-languages to the “language of the conquistador”: they are gradually “surfacing”, “influencing”, “emerging” in the face of a prevailing milieu of European or Americanised literary tones and structures (*History of the Voice* 7, 13).

Brathwaite considers the expression and appreciation of “nation language” as vital testimony to the Caribbean region’s position at an enforced intersection between “Western” and “African” languages and cultures. His understanding of the development of “nation language” constitutes a process of appropriation of a dominant discourse. By gradually reconfiguring the colonial languages “of the conquistador”, the nation language of oral speech builds a vital alternative to official discourse and becomes a symbolic social and political rebellion. However, as is evident in Joseph’s reading of a “pathetic” scenario in which X “tries hard to be modern and learn Prospero’s new technical languages” (Joseph 14), Brathwaite’s attempt to adapt another kind of discourse in his continuing use of “nation language” in the context of computing technology has frequently been regarded as a jarring mismatch between old and new, literate and illiterate. Such interpretations are partly based in the kind of assumptions outlined by Alondra Nelson: if a “cutting-edge product, or the high-tech society” is defined in opposition to “primitiveness or outmodedness”, it is easy to understand Joseph’s presumed binary between the “old” oral language which is X’s natural speech and a “new” technological language engaged in his encounter with word processing software. A similar disjunct is at play when Banks notes the association of being “non-technological” with being “unable to learn Standard English” (Banks 12). Though Banks critiques the “rhetoric” surrounding this alignment, his statement acknowledges an alignment of “Standard” speech with the “prospero language” of the computer, and the attendant implication that the “non-Standard” dialect of Brathwaite’s “nation language” has no relevance to a technologised environment. Since Brathwaite’s portrayal of “nation language” is consistently steeped in references to a pre-Middle Passage African context, it is not an immediately obvious pairing with the “modern” flavour of “Prospero’s new technical languages” (Joseph 14).

In a 1989 interview with Brathwaite, Stewart Brown neatly summarised the perceived discrepancy between the non-standard aspects of “nation language” and a more regimented standard of the “language of the word processor”. Brown suggested that the representation of discourse in “X/Self’s Letter” deliberately contrasts “nation language” with the language of “the word-processor”:

SB: I was interested in the poem that played around with the language of the word-processor, especially in terms of thinking about using nation-language... the poem is full of puns between the two kinds of language... as if you were drawing attention to a kind of tension between technology and the history/conditions from which nation-language emerges...? (Brown, "Interview with Kamau Brathwaite" 84)

By interpreting Brathwaite's juxtaposition of these "two kinds of language" as a deliberate strategy to draw attention to a fundamental "tension" between technology and the "history/conditions" of nation language, Brown expresses the kind of perceived incompatibility between standard/non-standard languages discussed above. Indeed, Brathwaite's portrait of a historical dichotomy between suppressed subaltern languages and the "official" language of colonial bureaucracy seems a reasonable basis for Brown's interpretation of a "tension" between opposed versions of language in X/Self's "Letter". His reading of an uneasy relationship between "technology" and the "history/conditions" of nation language is rooted in the association of computing technology with the kind of languages "of the conquistador" described by Brathwaite.

As Brown implies, the computer's interface and programming languages are based in the discourse of politically dominant, economically strong "Euroimperialist" nations endowed with the necessary infrastructure and income to develop technological luxuries such as the personal computer. His interpretation therefore assumes that the languages of "obedience, command and conception" – which Brathwaite paints in fundamental opposition to "nation language" – are embodied in the computer as a technological object. However, instead of acquiescing to the idea that the language of technologised mastery is somehow alien or indifferent to the expression of "nation language," Brathwaite declared that he intended to suggest "quite the opposite":

What I was saying there was that technology makes nation-language easier... the computer has made it much easier for the illiterate, the Caliban, actually to get himself visible [...] because the computer does it all for you. You don't have to be able to type, you can make mistakes and correct them or leave them, you can see what you hear

[...] the spoken word can become visible in a way that it cannot become visible in the typewriter where you have to erase physically. (Brown, "Interview with Kamau Brathwaite" 84)

In addition to emphasising the importance of amateur interactions with computing software, Brathwaite's refutation of an unsolved tension between "technology" and "nation language" in "X/Self's Letter" echoes Amiri Baraka's argument that political power can be achieved through the "power to create" (Baraka 155). His references to "the illiterate, the Caliban" also refer back to the casting of technological language in "X/Self's Letter" as "prospero language", recalling the poem's suggestion that the capabilities of technology might be reappropriated for the creative purposes of marginalised and non-expert individuals. By calling the electronic screen a "miracle," Brathwaite infuses his statement with a sense of the computer's capabilities as a factor whose function and process hovers beyond comprehension, as in the description of the computer as "obeah blox" in "X/Self's Letter". His account makes a virtue of the flexibility and mutability of the computer screen's display, which is "flickering rather than durably imprinted" (Hayles, *My Mother Was a Computer* 103).

Brathwaite's repetition of "visible" in the above quote also reiterates the importance of visual aspects of screen-based word-processing to his understanding of the desktop computer's radical impact on poetic communication. His statement on technology and nation-language suggests three ways in which the computer might affect the idea of becoming "visible". Firstly, Brathwaite describes the ability to become a publicly heard "voice" via written communication as the chance for "the illiterate" – who he glosses as a "Caliban" figure – to "get himself visible". This is facilitated by computing technology as an "easier" mode of production. The second version of "visibility" refers to the almost-instantaneous appearance of words as they are typed and viewed upon a screen. The immediacy of this appearance is the basis for Brathwaite's notion that the "spoken word" is rendered "visible" by its display onscreen, while the final interpretation of the "visible" moves away from literal definition. When he states that the "spoken word... cannot become visible in the typewriter," Brathwaite employs the term as shorthand to compare the immediacy and impermanence of a spoken utterance

with the qualities of a word appearing on the computer screen as it is typed. It is the mutability of the “visible” onscreen text which leads Brathwaite to suggest that the computer allows its user to “see what you hear”; in the interview which concludes his 1993 collection *Barabajan Poems* he explains that the computer allowed him to discover “a whole new way of SEEING things I was SAYING” (Brathwaite, *Barabajan Poems* 378). As demonstrated earlier in this chapter, the instantaneous and responsive display of text onscreen allows the user to rework a text – to “make mistakes and correct them” – with no trace of a previous incarnation, and Brathwaite compares this with the way an orator might rehearse permutations of a sentence aloud with no written record of the earlier versions.

Brathwaite’s understanding of the “visibility” of language in the word-processor became crucial in his development of a typographic style which seeks to give oral expression a written form. Expanding his sense of the computer’s usefulness for making language “visible”, in the early 1990s Brathwaite developed an idiosyncratic aesthetic mode he calls “Sycorax Video Style”. This uses the selection of fonts accessible within his computer’s word processing interface to produce eclectic layouts with densely varied typography, tactics which Brathwaite suggested might be used to represent aspects of the spoken or performed character of what he terms “nation language”. Sycorax Video Style combines Brathwaite’s interest in the creative potential of word processing with aspects of his poetic ideology. Its extravagant visual qualities represent the culmination of Brathwaite’s growing determination to harness the greater freedom of typographical control offered by the word processor. It represents the confluence of Brathwaite’s insistence on the oral nature of “nation language”, and the political importance of self-expression using this language.

Brathwaite has described his Sycorax Video Style as seeking to enable ‘nation language’ to surface, or at least to occupy a page’s surface. The style draws emphasis on certain words and sounds; it also appears to imbue words and phrases with a material quality drawn from its reference to objects, often using visual puns and literal associations. In the example below, the extravagant reach of a ‘tall hope’ is reflected in the extended first letter:

This is just a tall hope, really - the first perhaps telephone poles of the first 'crazy' dreamstories

(Brathwaite, *ConVERSations* 156)

Graeme Rigby suggests that the importance of the computer for Brathwaite's composition lies in the malleability of the onscreen text, claiming that "[t]he Apple Mac has enabled Kamau to hold the very tool which shapes the image, to shape it himself in its minute particularities, to emphasize and sing the shapes as he creates them" (Rigby 252). Rigby's account extends the sensory impact of Brathwaite's own emphasis on the visual display of the screen-based "writing space". Similarly, Breiner describes the Video Style as "a kind of shaped poetry, whose visual effects function, remarkably, as a complex metaphor for orality" (Breiner, "The Half-Life of Performance Poems" 22). For Breiner, the Sycoraxed texts might be a kind of blueprint, "a set of instructions composed before the performance, analogous to a dramatic script or musical score" (Ibid). Both critics emphasise the attention to the shapes of letters, made prominent on the page by their expansion and emphasis.

Brathwaite himself presented the typographic experimentation of Sycorax Video Style as a kind of aesthetic credo; from the 1992 *Bloodaxe* edition of *Middle Passages* onwards all editions using this 'style' include a note on the typography in the frontispiece, which reads "[t]ext based on the 'Sycorax Video Style' being developed by Kamau Brathwaite". This language of 'development' echoes terminology common to both software production and economic theory: the claim elevates Sycorax Video Style to the status of a patented innovation. Brathwaite conceives his "Video Style" as playing a dual role. It attempts to reveal the patterns and cadences of oral speech in the manner suggested by Rigby and Breiner, while also seeking to emphasise the previously submerged nature of that

voice. Explaining that the “Video Style” is based on “the voice of the fonts from a ole computer I call Sycorax” (Brathwaite, *ConVERSations* 176), Brathwaite adds that the figure of Sycorax “expresses easily and well the nature of a person whose vision has been obscured by a landslide of awesome proportions” (Brathwaite, *ConVERSations* 176-7). The emphasis on emergence and surfacing continues in his interpretation of Shakespeare’s play as “a blueprint, a report on something that is coming into being” (Ibid), where the figure of Sycorax is submerged within the narrative:

And the alternative, the alter/native to the whole thing, the person/(s) who is/are submerge in and within the narrative [...] Sycorax being the submerge African and woman and *Iwa* of the pla(y), Caliban mother and person who deals with the herbs and the magical sous-reality of the world over which Prospero rules. And therefore I celebrate her in this way – thru the computer – by saying that she’s the spirit/person who creates an(d)/or acts out of the video-style that I workin with. She’s the *Iwa* who, in fact, allows me the space and longitude – groundation and inspiration – the little inspiration – that I’m at the moment permitted. (Brathwaite, *ConVERSations* 177).

Brathwaite’s characterisation of “Sycorax” as submerged within the structure and content of Shakespeare’s play correlates with his sense of her spirit surfacing from the machine via the emerging “voice” of its fonts. Sycorax’s symbolic role also recalls Brathwaite’s account in *History of the Voice* of an “underground language... constantly transforming itself into new forms” (7). Torres-Saillant cites Brathwaite’s description of Sycorax as “the carrier, the keeper, the protector of the native culture,” who preserves “in a submerged manner the very essence of the native culture,” containing “the secrets of a possible alternative culture for the Caribbean” (Brathwaite, qtd in Torres-Saillant 705). In Sycorax Video Style, however, the process of emergence takes the form of creative composition and publication, expressed through written language rather than gradual influence upon spoken forms.

For Brathwaite, the computer is not only a tool to be used and mastered, but also an opportunity for revelation and increased “visibility”. His exposure of a Sycorax in the works casts her (and the object which contains her) as mother,

muse and magical figure. Elaine Savory glosses the figure of Sycorax as “the ghost in the machine for Kamau Brathwaite, the muse who inspires his recent work” (Savory 750) and as with the screen described as a “miracle”, Sycorax’s role as the “*Iwa*” or “spirit/person who creates an(d)/or acts out of the video-style” recalls Brathwaite’s account of the computer as “obeah blox” in “X/Self’s Letter”. For Savory, the “strongly spiritual element” (Savory 750) evident in Brathwaite’s characterisation of Sycorax is part of a broader “acknowledgment that for generations African peoples have used spiritual powers in the service of their fight against oppression” (Savory 750):

It is this spirit in the form of Sycorax, the anti-colonial matrix of creativity, who inspires the machine, the Western computer, to produce Brathwaite's video style, which so markedly brings orality into the written word. (Savory 750)

Arguing that Brathwaite is “one of the very few African-centered cultural thinkers to be able to co-opt the computer in a thoroughly anticolonial and thoroughly creative way” (Savory 750), Savory draws attention to the poet’s suggestion that “the forces that created the computer are very similar to our gods of the Middle Passage” (Brathwaite, *Barabajan Poems* 378). She argues that Brathwaite’s uses of “African-descended forms of creativity redesign the intention of Euro-American technology” (Savory 751), and the conflation of Sycorax-as-African-mother with Sycorax-as/in-computer represents a creative conflation of technology with “African-descended” themes. Yet by reconfiguring characters from Shakespeare’s play for his own purposes, Brathwaite also roots his account of African descent and European technology in a version of a canonical European text. As the recurring references to “Prospero”, “Caliban” and “Sycorax” indicate, the conceptual framework of Shakespeare’s *Tempest* is an important reference-point in Brathwaite’s portrayal of computing technology as a means of promoting “nation language” and making “the Caliban... visible”. Though the interweaving of technology and creativity in Brathwaite’s conception offers a reimagination of the functions of the computer, transfiguring it from software to sorcery, it also relies on a series of established conventions and associations laid out in the “blueprint” of *The Tempest* (Brathwaite, *ConVERSations* 177).

Brathwaite's use of Sycorax as "ghost in the machine" conveys his sense of the computer as an object aligned with ancient, mysterious forces rather than explicable technologies. By endowing the computer with spiritual significance, he also seeks to escape the machine's conventional association with the precision of "prospero language" as a "Standard" technological language. The reference to Sycorax draws on a rich seam of references beyond the character's association with witchcraft, invoking resonant associations of the "mother" with the idea of a "mother tongue" in order to re-imagine the computer as a productive and nurturing object. In her introduction to *My Mother Was A Computer*, Katherine Hayles echoes Brathwaite's concern with the emergence of voice when she references Friedrich Kittler's essay "The Mother's Mouth" to consider the connection of the mother figure to forms of written and spoken language:

Kittler notes that with the introduction of phonics in the nineteenth century, children were taught to read by sounding out words, first articulating them out loud and then subvocalizing them. These practices gave "voice" to print texts, particularly novels—and the voice most people heard was the same voice that taught them to read, namely, the mother's, which in turn was identified with Mother Nature and a sympathetic resonance between the natural world and human meaning. (Hayles 4)

The relationship between the mother's voice and the process of giving "voice" to print texts described by Kittler is significant for Brathwaite's portrayal of a protagonist who seeks to define his own "voice" for the benefit of his "Mamma!". The notion of the "mother" – in this case, accessed within and via the computer – also functions as a multifaceted symbol and reference-point for new and emerging versions of language and self-expression.

Retitled "Letter Sycorax", Brathwaite's 1992 and 1993 revisions of "X/Self's Letter" offer a "reorienting/re-oraling" (Brown, "Writing in Light" 135) of the original content. These versions use alterations of font style and size to pick out specific letters. For example, enlarged letters leaping from the page draw the reader's eye, sections of text are picked out in alternative fonts, and graphical elements are introduced. Despite the affirmations I have cited above, these

innovations were not always welcome to critics and readers. Though Mobilio finds that “the printed word doesn’t rise much closer to singing than in the work of Barbadian troubadour Kamau Brathwaite” (Mobilio, “Middle Passages” 180), other reviewers have responded unfavourably. McLeod mourns that “Brathwaite has abandoned traditional literary language in favor of his so-called “Sycorax video style”, damningly describing the poet’s use of “capitalization, spacing, punctuation” as “impediments to his method” (McLeod, “Middle Passages” 179), while Thomas finds the additional formatting “obtrusive”, giving “the impression of over-indulgence on the part of the author” (Thomas, “Sunken Treasure” 184). It may be obtrusive but it is seldom random. For example, in the 1992 edition of *Middle Passages*, X’s words are decorated by emphases, enlarged letters and symbols and occasional lines in heavy bold print. In particular, repetitions of the letter “X” are highlighted in what becomes a visual incantation, with the visual identity of X imprinted into the words he uses. This is particularly effective in the final lines, where X/Self proclaims himself an

X

pert

(Brathwaite, *Middle Passages*)

as if his name has always prepared him for this role, and vice versa. In 2001’s revision for the collection *Ancestors*, the calligraphic letter is replaced by a pixelated X, interspersed at various sizes throughout the poem (Fig. 1). The use of pixels further emphasises the association with the computer, itself named “dis X”. *Ancestors* matches this pixelated intervention, however, with the gaping opening of smoothly enlarged O’s:

guess what! pun a computer **O**

kay?

(Brathwaite, *Ancestors*)

The transition to the enlarged O not only alters the appearance of the poem's layout; it also invites alignment between certain words. Thus X's assertive "O | kay" at the poem's start, which accompanies his denial that he is joining "the mercantilists", finds its mirror in the penultimate verse's scathing reference to "a whole rash a de so-call creole econOmiss".

The typographical innovations of the later versions are also used to adjust the prominence and purpose of the Mother-figure within the poem. In 1987's "X/Self's Letter", the reader must extrapolate whether they are reading words attributed to X/Self or the interjections/responses of his Mother, based on the context and content of their words. In later versions, the two are clearly demarcated by differences of font size and typography. The Mother's lines are emphasised by the use of italicized, bold or enlarged text, making the conversational aspects more prominent. In the original version, "Mamma" is never named "Sycorax", and though many critics have read the characters of "X" and his "Mother" as simple ciphers for "Caliban" and "Sycorax", later versions continue to complicate and negate these roles. Goldberg notes the multitudinous characterisations of "Caliban" figures in Brathwaite's poetry, where Caliban is portrayed as "Maroon revolutionary and rebel, a prophet and terroriser who can be the poet's persona" but is also "a traitor, a mulatto, an opportunist, a mindless dancer, and a terrorised victim" (Goldberg, *Tempest in the Caribbean* 85). As with Caliban, Sycorax invites a complex web of interpretations in Brathwaite's poems, and the Sycorax/Mother in "X/Self's Letter" seems markedly distant from the powerful imagery of *Iwa* and witchcraft described in *ConVERSations* (quoted above). In each version, the Mother's responses contradict Brathwaite's claims to Sycorax as technologised muse, as she appears increasingly bewildered by the deluge of new terminology with which X describes his nascent technological prowess. Clinging to the familiar objects of pen and paper, the doubtful Mother demands to know "why i cyaan nuse me hann & crawl up de white like i use to?", asking "since when I kin / type?" In the 1987 version of "X/Self's Letter", the last words echo the doubts of X's "Mamma", still questioning the causes and consequences of this new phenomenon:

why is

dat?

what it

mean?

(Brathwaite, *X/Self* 87)

As Thomas notes in her review of *Middle Passages*, the “Letter Sycorax” version of the poem no longer includes this final questioning, and she interprets this removal as “suggesting that the narrator of the poem has resolved these questions, but is defeated by the pervasiveness of the corruption and exploitation of his society” (Thomas 184). Yet the removal of the final questions from “Letter Sycorax” means that the poem ends with a final call from X: “& | mamma!”. The mother’s absence suggests disengagement rather than resolution: X’s cry is foreshadowed by his earlier question, “yu hear/in me mwa?”, which appears in each version but is made more prominent by the font size and typography in “Letter Sycorax”. The mother’s unresponsive silence in “Letter Sycorax” is emphasised by the increasing urgency of X’s calls, where “& mamma!” is written in increasingly large, bold letters as the poem progresses.

In “Letter Sycorax”, X’s final call is met with a blank page and a seemingly absent interlocutor—an absence which is made more stark by the layout’s increased emphasis on the conversational aspects of the poem. In Brathwaite’s later reimagining of the poem, published in 2001’s *Ancestors*, the concluding questions are reinstated. This time, however, they are also enigmatically answered, by the accompaniment of an enlarged graphical representation of a pixellated X (Fig.1).

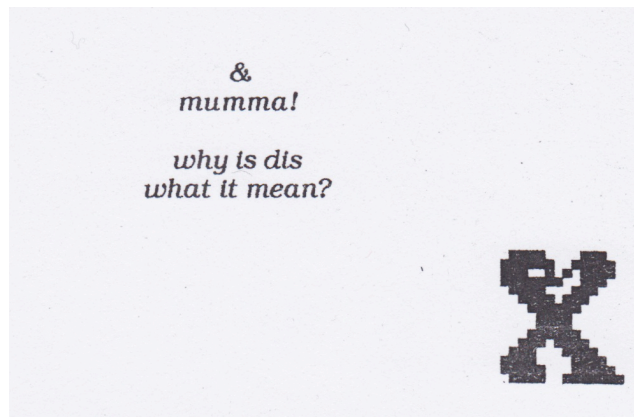


Fig. 1

The intended status of this symbol seems deliberately unclear; throughout the poem, “X” also refers to the protagonist’s name for his computer – “why a callin it X?”, he muses halfway through the poem. This pixelated final “X” might therefore offer the figure of the computer itself as a conclusive “meaning” or resolution to the final questions. However the positioning and separation from the text leaves the addition’s status ambivalent, subject to an interpretation which depends partly on the reader’s approach to reading *Sycorax Video Style*. This indeterminacy of graphic and typographic elements is both a strength and difficulty of the “Video Style”; at times, the computer graphics are used to interject, at others, they appear supplementary or decorative. Brathwaite’s enduring concern with the expression of suppressed voices means that at times the potential for expression itself becomes submerged beneath his attempts at portrayal, so that the voices’ meaning is obscured by the very methods supposed to clarify them. Perhaps this is part of the point; Kelly Josephs suggests (against Brathwaite’s own claims) that the Video Style is designed to “obscure” the language of the region, making it indecipherable to outsiders.

Certainly, the Video Style has made Brathwaite’s poetry considerably more inaccessible – in certain cases even unprintable. In *ConVERSations*, he bitterly recounts the increasing difficulty of even getting his work published:

It involves a process of video- thinking and a presentation – a representation – of illuminated scrolls which the present concept of the 4 1/2" by 7 1/2" margin **book** with a certain uniform **face**, won't interest and therefore can't/won't/won't entertain – hence my struggle with publishers and printers over the presentation – the representation – of all my new 'Sycorax video-style' stuff... why in the end I have to publish ... myself...

[tho the printer succeeded in well **fuckin** up – even tho is 'print ready' – its pagination + the signatures, so that it wasn't *ready* when I needin it etc etc etc—*an dat's basically because e tink e know better dan mwe about MU-RAL*]

(Brathwaite, *ConVERSations* 167-8)

Graeme Rigby supports Brathwaite when he notes that too many poets and authors “submit” themselves to “a fairly narrow range of typefaces and to the conventions of the publisher/printer and happily abandon the seductions of the possible” (Rigby, “Publishing Brathwaite” 251), while Stewart Brown goes further when he describes Brathwaite’s work as “a liberation of the poem from the limitations of the conventions of 'text-bound' literature” (Brown, *Tourist, Traveller, Troublemaker* 206). However, these ‘liberated’ poems are released into a publishing world which, by Brathwaite’s own admission, has been lukewarm in response to his onscreen innovations.

Stewart Brown celebrates Sycorax Video Style as an attempt to express the “language of life” in the Caribbean – what Brathwaite has termed “nation language” – in printed poetic form:

Brathwaite's “writin in light” Sycorax video style *is* both a logical development of his own creative practice and another step on the road Caribbean poets have been treading... towards finding a means of accommodating the language of life as it sounded in the Caribbean

and life of letters as they are printed on the page. (Brown, "Writing in Light" 135)

However, as Charles Pollard has noted, "Sycorax Video Style" is far from an ideal or even an effective means of expressing the intonations and structures of "nation language". Disagreeing with Elaine Savory's opinion that "Brathwaite has stepped into a space in which orality, the book and the screen combine to project an immediate sense of cultural identity and linguistic freedom" (Quoted in Pollard 128), Pollard judges that "some critics have been too enthusiastic in their praise" (128). While he agrees with Stewart Brown that the style is successful in its aim to "resist the standard conventions of the written text," he suggests that it is only partially successful in achieving Brathwaite's more heavily theoretical aims relating to his own poetic expression of "nation-language".

Noting a risk that "it may be difficult to sustain interest in Brathwaite", Charles Pollard situates the difficulty of finding publishers for Brathwaite's texts in "a familiar postcolonial bind" (Pollard 129). Comparing the reception of Brathwaite's oeuvre with that of Nobel Prize-winning poet Derek Walcott, Pollard argues that Brathwaite's commitment to the model of print publishing presents difficulties in terms of acceptance in a "neocolonial" publishing industry:

The success of his effort to decolonize the visual conventions of poetry may well depend on the dissemination of his ideas by a neocolonial publishing industry that is largely responsible for perpetuating those conventions. (Pollard 129)²⁵

As a Caribbean poet not only experimenting with form and visual representation, but also grounding it in political incentives, Brathwaite has struggled to find a voice within a publishing industry unwilling to deal with the vacillations of a poet determined to take full control of his own text. As his bitter diatribe against the printers who have "succeeded in well fuckin up" his "print-ready" text confirms (Brathwaite, *ConVERSations* 167-8), the freedom promised, and in part afforded,

²⁵ Torres-Saillant agrees, noting that "Caribbean writers can seldom fulfil their professional aspirations exclusively on the basis of local success," since "[t]heir nations lack a dynamic publishing industry via which successful authors can participate in the literary market worldwide" (Torres-Saillant, "Trials of Authenticity" 698). He is less sympathetic than Pollard, however, adding that "[o]ne cannot reasonably expect the West to embrace poetic systems that deny its centrality" (Ibid 699)

by the availability of word-processing does not automatically translate to the full emergence of the “voice” enabled by that technology. The paradox is that Brathwaite's Sycorax style, intended to express the potential of “writin in light,” to bring speech and text into closer harmony, appears to have led to a diminished audience for Brathwaite’s poetry. Difficult to print, and not easy to read, the Sycorax Video Style promises much, but has been thwarted in its delivery: the formal attempt to enhance the representation of voice, threatens to obscure that voice altogether.

Pollard’s reasoning does not lie with the difficulty of the text or the “interpretive work necessary in reading Sycorax video-style”. His questions are regarding the actual process of interpreting a text written in the ‘style’:

How should one hear the tonal modulation in his [Brathwaite’s] changing of a font style? What is the inflection of a line that starts flush to the right margin? How does one relate the amplitude of sound to the font size? What is the tonal inflection of a picture or blank space? Sycorax video-style... has not yet established a system of conventions that would enable different readers to enunciate the texts in a way that would allow them to hear the common sound of nation language. (129)

Pollard is correct that the lack of a clear ‘system’ demarcating Sycorax Video Style makes it difficult to conclude an intended effect, beyond its differentiation from established conventions of print publication. Treated as a whole, the works produced in Sycorax Video Style do not appear to reveal the kind of “blueprint” for intonations and clues for an intended oral pronunciation of the kind suggested by Rigby and Breiner, and sought by Pollard. However, although Sycorax Video Style may fail as a “system” of the kind implied by its ambitious classification as a “style,” Brathwaite’s typographic experiments do have a significant impact, not only altering the sense and emphasis of individual poems, but also conflating these representations of the vagaries of spoken language with typed expression. Though they may not indicate ‘tonal modulation,’ Brathwaite’s Sycoraxed revisions experiment with the impact of typography as a means of accentuating text and drawing powerful visual associations.

Amongst a cacophony of voices eager to proclaim their views on computing technologies and literature, Brathwaite's idiosyncratic responses reveal unusual concerns with the relationship between oral performance and inscribed text. As I have argued, for Brathwaite, the potential of computing software is related to the speed of composition and revision, combined with the capacity to alter its visual appearance via the "miracle" of an array of fonts and typographical variations. His poetic representation of this new writing technology offers a compelling portrait of amateur responses to computing technology. Though Brathwaite's comments ignore the practical factors which prohibited access by individuals from geographically and economically marginalised communities, for whom personal computing was by no means an 'every day' capacity in the early 1990s, his expressions of delighted empowerment offer an *ars poetica* for the possibilities of literary experimentation with the word processor. Rather than dwell on the practical limitations imposed by economic and social factors, this idealistic enthusiasm for the possibilities of his newly discovered medium allow him to focus productively on the potential capacities offered by the software. Brathwaite's poetic portrayals in "X/Self's Letter" and its subsequent revisions eloquently capture the experimental vigour of its enthusiastic protagonist, while still incorporating the possibilities of confusion and uncertainty via the baffled responses of X's mother.

In seeking to capture the experience of encountering bewildering aspects of computing technology, Brathwaite's focus on the innovative possibilities of word processing software makes him an intriguing figure for comparison with many subsequent literary figures—both authors and theorists—who considered the computer's potential as an "electronic writing space" (Bolter, *Writing Space* 1). Unlike Bolter, Landow, Joyce and other commentators, Brathwaite's interest in "the miracle of that electronic screen" begins and ends with the process of writing, as he anticipates that his poems will be encountered in the kind of "chiselled" inscription of the "fixed" text celebrated by Sven Birkerts. However, as I have begun to discuss in my comparison with Bolter's proclamations in *Writing Space*, there are significant overlaps between Brathwaite's understanding of the powers afforded by composing and formatting poetry in the word processor and the

rhetoric associated with compositional experimentation in hyperfiction and other “born digital” literary forms. This affiliation is illustrated in reviewers’ tendency to compare Brathwaite’s print-based publications with the variations of computer-based texts. Rhonda Cobham-Sandar wrote of *Barabajan Poems* that “[t]he text is set up to be read via the click of a mouse rather than the turn of the page” (Cobham-Sandar 200), while Lee Jenkins’ review of Brathwaite’s *Magical Realism* wonders if the experimental aesthetic of “Sycorax Video Style” might be better suited to electronic publication:

Brathwaite uses that “ole computer” like a compositor's hell box and its Style Writer printer like a printing press of old, resisting the allure of the “sibyl of the internet” (1: 161). *Magical Realism*, entrancing and frustrating in equal measure in its present format, would prove more user-friendly were it to find its final formless form as hypertext, but this would be at the expense of its own iconic bibliographic code. (Jenkins, “NewWorld/NewWord Style” 171)

As Jenkins indicates, experimentation with the electronic form of “hypertext” has sought to expand the possibilities of writing on the computer into the potential for reading. The next chapter considers how the problematics of Brathwaite’s print-focused approach relates to others’ move to publish texts in electronic spaces, both on disk and online. Comparing Brathwaite’s interest in ‘the miracle of that electronic screen’ with experiments in digitally transferred poetry and hyperfiction, I discuss the difficulties and rewards involved in not only producing creative content via the computer screen, but saving it there as well.

CHAPTER 2: SYSTEM OPACITY

In the previous chapter, I described Kamau Brathwaite's view of word processing as a powerful new tool for written self-expression. Celebrating the speed and flexibility of words displayed via the "miracle of that electronic screen," Brathwaite characterises the computer as an empowering device with the potential to revolutionise authorial expression.²⁶ However, this enthusiasm for the flexible qualities of "electronic writing space" contrasts with more anxious rhetoric emerging during the same time-period and, in the case of Brathwaite, in works by the same author. The apparent ease with which digital texts could be erased or overwritten – the very aspect which Brathwaite, Bolter and others celebrate as an empowering quality for the creative writer – also prompted concerns among writers anxious not to "lose" their texts, whether as works-in-progress or in various stages of publication. Such fears are imaginatively expressed by Brathwaite in an account of computer malfunction in the introductory preface to his prose poem "Dream Chad". Recounting his own emotive response to the seeming loss of "text/wiped out of the machine" (Brathwaite, *DreamStories* 55), Brathwaite considers another vital aspect of writing on the computer in the early 1990s: what happens when things go wrong. The works I discuss in this chapter depict encounters with electronic files in moments of technological breakdown or personal confusion, instances when texts' onscreen appearance – or disappearance – render them as seemingly "volatile, ephemeral constellations of data" (Stephenson n.pag.). Framing my discussion around three literary portraits of vanishing or elusive electronic texts, I demonstrate how each of these works draws on established literary metaphors of opacity, haunting and disorientation to describe encounters with computer-based texts which are affected by

²⁶ Brathwaite's enthusiasm for the "provisional" nature of "electronic writing space" emphasises the capacity for trial and error, an impression shared by Jay David Bolter and others who consider erasability and flexibility to be a crucial appeal of writing in "electronic space". Christian Vandendorpe comments that "The advent of the personal computer at the beginning of the 1980s made the writing process infinitely more fluid than it had ever been before. Being easy to correct, to format and to disseminate, digital writing was rapidly adopted by the many professions dealing with the production of text" (Vandendorpe, "Reading on Screen" 205). Vandendorpe adds that "Over the past twenty years, the dominance of Microsoft Word is due to the fact that it was the first word processor to give the user full visual control over the text, a control popularized by the acronym *wysiwyg* ("what you see is what you get")" (Ibid 206).

malfunctioning, confusing, or inexpertly operated systems. Although the creative and critical accounts considered in this chapter continue to celebrate the enabling potential of computing technologies, they also consider difficulties encountered by individuals when adapting to new ways of composing, saving, sharing and reading creative literary writing.

I begin by comparing the anxieties expressed in Brathwaite's short story "Dream Chad" with the performed erasure of William Gibson's self-deleting electronic poem "Agrippa", which was distributed on "diskette" as part of a larger project titled *Agrippa: Book of the Dead*.²⁷ Positioning "Dream Chad" and "Agrippa" as texts which engage directly with the problematics of uncertain or amateur interactions with computing technology, I trace affinities between these works' portrayal of ephemeral electronic texts and contemporary theoretical approaches to acts of electronic storage and inscription. The moments of actual or potential "loss of text" (Brathwaite 55) depicted in these works emphasise problematic aspects of composing and reading text via computing technologies, and draw attention to what Michael Heim has called "system opacity": the user's inability to comprehend underlying processes and causes when engaging with computing technologies. Brathwaite expresses frustration at the loss of control he experiences as the tale he has painstakingly typed onto the computer seemingly disappears before his eyes, while the format of Gibson's self-deleting poem "Agrippa" was designed to draw attention to the text's status as an uncontrollable electronic object. In the second half of this chapter, I consider how effects of user uncertainty and system opacity explored in "Dream Chad" and "Agrippa" also resonate in accounts of hypertext fiction in the early 1990s. Centering my discussion on the depiction of fragmentation and readerly disorientation in Shelley Jackson's 1995 fiction *Patchwork Girl*, I demonstrate how this hypertext narrative finds aesthetic virtues in the uncertainties of interacting with a text in electronic space. Contrasting with the deletion and disappearance of "Agrippa" and Brathwaite's malfunctioning text, hypertext narratives test their readers' technological expertise and expectations by insisting on repeated acts of re-

²⁷ I follow Matthew Kirschenbaum's method of differentiating between the book and poem. Throughout this chapter, *Agrippa* refers to the printed book; "Agrippa" the poem released on disk and subsequently circulated in text form via internet listservs.

reading and self-positioning in “electronic space”. The publication format of these works is also significant; both “Agrippa” and *Patchwork Girl* were released in portable electronic storage formats, “Agrippa” on a disk distributed concealed within a printed book, and *Patchwork Girl* on CD-ROM.²⁸ In this, they diverge from Brathwaite’s published works, which rely on printed formats for publication despite retaining visual references to their technological origins. In each case, the works explore effects of “system opacity” through representations of ephemerality and erasability in the new electronic medium.

My use of the term “system opacity” throughout this chapter is gleaned from Michael Heim’s 1987 study of word processing. Defining system opacity as a “fundamental disparity between the user and the engineered setup of the interface”, Heim adopts the term from John Seely-Brown’s notion of the “self-concealment of computational systems” (Heim 131). In Heim’s account, details of a computer system’s functions are usually “hidden beneath the surface”:

No matter how much human skill becomes accommodated to word processing, the phenomenon will always remain partially hidden [...] Physical signs of the ongoing process, the way the responses of the person are integrated into the operation of the system, the source of occasional blunders and delays, all these are hidden beneath the surface of the activity of digital writing. [...] The writer has no choice but to remain on the surface of the system underpinning the symbols. (Heim 131-2)

As I demonstrate in this chapter, the metaphors of surface and depth, visibility and obscurity employed by Heim in his account of “system opacity” have continued to recur in critical and creative portrayals of computing technology, though as I discuss in this chapter, they are refined and challenged by subsequent commentators. Heim’s emphasis on the “partially hidden” aspects of computer processes offers an early insight into the potential gulf between systems’ increasingly “user-friendly” appearance and the complexity of their underlying

²⁸ By remaining within the electronic medium, Gibson and Jackson’s pieces raise distinct issues regarding restrictions of accessibility and usability. Though Matthew Kirschenbaum notes that “Agrippa” quickly became “one of the most persistent and available literary artefacts on the Web” (Kirschenbaum, *Mechanisms* x), readers were initially intended to encounter the text as a self-deleting program run from a floppy disk, while access to *Patchwork Girl* remains restricted to those who run it on CD-Rom, using the purpose-built software of Eastgate’s Storyspace platform.

functions.²⁹ The texts I discuss in this chapter have been chosen not only for their direct engagement with the consequences and ramifications of “system opacity”, but also for their expression of anxieties about accessibility and software malfunction which were particularly widespread during the early 1990s.

Lisa Gitelman captures the problematic aspects of “system opacity” as a non-expert user encountering computing technology in her introduction to *Always Already New* (2006). Contemplating the “mysterious new ways” of digital inscription, Gitelman offers the viewpoint of an unabashed amateur who is only “fully confident” after her words have been transferred from digital inscription to physical printout:

Digital media inscribe too, and they do so in what are mysterious new ways. (Mysterious to me, at least, and anyone else without an engineering background.) I see words written on my computer screen, for instance, and I know its operating system and other programs have been written by programmers, but the only related inscriptions of which I can be fully confident are the ones that come rolling out of the attached printer, and possibly the ones that I am told were literally printed onto chips that have been installed somewhere inside. (Gitelman 19)

Gitelman argues that the gulf between expert and inexpert perceptions of “system opacity” is a crucial aspect of examining new media, where “the vernacular experience of... creatability and saveability makes at least as much difference to the ongoing social definition (that is, the uses) of new, digital media” (Gitelman 20). In this chapter, I endeavour to untangle and define the affective and intellectual repercussions of this kind of uncertain encounter with various versions of digital inscription. Whereas the previous chapter focused on the creative literary use of word processing software as a way of preparing texts for eventual print publication, here I develop this topic to discuss how representations of writing “onscreen” relate to the computer’s role in saving, sharing and reading creative works. The specific qualities and concerns accruing

²⁹ The 1990s was a period of particularly intense change in this regard, as the multitude of software options and operating systems which had competed for viability throughout the 1980s began to settle into the more standardised, monolithic commercial enterprises which dominate software and operating systems today. See Ceruzzi, *A History of Modern Computing* (2003)

to new methods of creating, storing and sharing electronic texts in the 1990s are expressed via imagery and formal devices which seek to capture the uncertainty of amateur encounters with computing technology, as in Gitelman's preference for "inscriptions... rolling out of the attached printer" over those concealed "somewhere inside" the mysterious body of the computer. In each of the examples I discuss, the potential loss of electronic text becomes aligned with the user's uncertainty when attempting to engage with a computer's invisible functions.

Although this chapter examines specifically literary approaches to the misunderstandings and frustrations arising from contemporary encounters with "everyday" computing technologies, the idea of "system opacity" has resonances beyond critiques of electronic writing. For example, it has become a convention of speculative fiction to cast computing technologies as impervious systems, representing fundamental breakdowns of communication between human agents and computers. Facets of "system opacity" are evident in the portrayal of uncontrolled and/or uncontrollable technological entities who follow the logical structure of their designed evaluative and functional processes, but whose actions and reasoning are obscure to the humans who attempt to understand them. From the murderous HAL in *2001: Space Odyssey* to the rational basis for assassinations by "ethical" supercomputer "The Zookeeper" in David Mitchell's short story "Night Train", authors of speculative fiction have envisaged variations on this theme, offering up alternative or futuristic scenarios in which computers and humans become embroiled in a drastic power struggle.³⁰ The computers invoked in the literary works I discuss in this chapter are prosaic rather than exotic; they save files on floppy disks and run word processing software, with no pretensions to control spaceships or global systems. Nevertheless, the accounts I consider deploy drastic imagery to describe the loss or unnavigability of electronic text, including metaphors of spiritual possession and haunting, bodily harm, and

³⁰ Paul Ceruzzi sounds an unusual note of warning when he compares HAL to the development of contemporary computers, finding that "The year 2001 has come and gone, and it did not bring with it a realisation of the intelligent computer HAL, the star of Stanley Kubrick's movie *2001 A Space Odyssey*. Many people came away from the movie thinking that the problem with HAL was that it was somehow out of control; but a closer viewing shows that HAL's real problem was that it worked perfectly. It broke down because it was trying to obey two conflicting instructions that were part of its programming: to obey the humans on board but to conceal from them the true nature of their mission. If a real version of a HAL-like intelligent interface ever appears, it will probably not be as robust and reliable as the fictional one" (Ceruzzi 346)

spatial disorientation. Endeavouring to outline the impulses behind these portrayals, I demonstrate how the versions of computing technology illustrated in these texts appear as mysterious objects whose illuminated screens conceal an unnavigable “interior” space, an arena whose rules and processes are barely understood and seldom encountered directly. The visual metaphor of “opacity” not only captures the difficulties of comprehending obscured and complex underlying processes, but also prompts new ways of interpreting and explaining complex functions and malfunctions.

My analysis of mysterious technological spaces and processes in this chapter continues a line of inquiry begun in Chapter One, where I discussed Brathwaite’s perception of his computer as inhabited by a version of the witch “Sycorax” from Shakespeare’s *Tempest*. Brathwaite’s “ghost in the machine” (Savory 750) is imagined as a magical figure emerging or surfacing through the “voice” of the computer’s fonts. The idea of Sycorax-as-spirit reappears in a different form in Brathwaite’s introduction to the short story “Dream Chad”, where the author describes his interpretation of an onscreen error alert message as the prophesying spirit of another computer, and concludes by wondering if the “warning” came from “Sycorax or the Spirit of the Machination” (Brathwaite, *DreamStories* 49). Brathwaite’s struggle to comprehend a seemingly “malfunctioning” computer in “Dream Chad” indicates an intriguing pattern of imagery used to describe technological uncertainties, which repeatedly associates inscrutable computing processes with imagery of spirits, haunting, mysterious interiors and the disorienting sensation of “becoming lost” (Coover n.pag.) in an uncertain or undefined space. Haunting spirits also occur in Gibson’s poem “Agrippa”, whose containing volume is subtitled “Book of the Dead” and contemplates past memories prompted by the discovery of a book of long-concealed photographs. “Agrippa” concludes with an oblique reference to the sound of “laughing / in the mechanism”, and the poem’s association with haunted and semi-autonomous technologies has continued in commentaries on its continuing presence online, with Gibson describing it as “this permanent ghostly presence on the internet” (Jirgens, “An Eye on Tomorrow” n.pag.). The pattern continues in Shelley Jackson’s *Patchwork Girl*, which depicts contemporary

technological concerns through gothic imagery and conventions partly adapted from its nineteenth-century precursor, Mary Shelley's *Frankenstein*.

In a short essay titled "Sites of Disturbance: The Gothic in Electronic Literature", Heather Anne Wozniak relates tropes and structural devices from gothic fiction to the format and thematic concerns of electronic literature. Arguing that the "hybridity, interactivity, and modularity" of new media has "proven to be an especially fertile site for the evolution of gothic tropes and themes" (Wozniak n.pag.), Wozniak finds that electronic literature "replicates and transforms the conventions of the gothic found in print literature and other non-digital media" (Ibid). Her essay begins by suggesting correlations between structural and formal devices, comparing interactive readership to "the gothic exercise of solving a mystery" (Ibid). Wozniak's impression of an affinity between gothic imagery and ways of expressing "problems and fears" relating to new technologies is particularly striking:

If the gothic expresses the anxieties of the particular cultural moment in which it is produced, readers of electronic literature can ask what problems and fears preoccupy modern culture. [...] Electronic literature reserves its most profound ambivalence for the computer itself. Fear of technology has been an undercurrent in the gothic ever since Mary Shelley's *Frankenstein* (1818) spun off science fiction, but the computer is a late-twentieth-century beast. To the conceptual pairings typical of classic gothic, the digital gothic adds human and machine, language and code, reader and writer. [...] The narratives of electronic literature happen on the site of the computer both literally and figuratively, on the physical hardware of the machine as well as in the imagined places of software and cyberspace. (Wozniak n.pag.)

I return to a more sustained discussion of cyberspace's "imagined places" in Chapter Three, which discusses authorial perceptions of the computer as a portal to the "immense realm" (Wozniak n.pag.) of the Web. Here, I wish to build on Wozniak's account of the "physical hardware of the machine" to explore the "gothic" resonances of encountering the workings of the computer as an individual object. Mulling on the idea that electronic literature might express a

“profound ambivalence” towards the computer, Wozniak suggests that a new set of “conceptual pairings” have been introduced by the computer’s arrival in the cultural scene as a “late twentieth-century beast”. These are “human and machine, language and code, reader and writer”, and the suggestion of electronic literature’s “profound ambivalence” implies a fundamental distinction between each of these categories. For Wozniak, this ambivalence is underscored by impressions of incompatibility or incomprehension, which she glosses rather sweepingly as “fear of technology”.³¹ Wozniak’s essay is a short introductory piece, and does not offer detailed analysis of supporting literary texts. Nevertheless, the reference to use of gothic tropes to capture an “ambivalence” regarding the computer, rooted in fear of a technological unknown, provides a suggestive conceptual framework for the texts I discuss in this chapter.

Though Wozniak refers confidently to “the digital gothic”, the use of gothic tropes to describe electronic environments has only recently begun to receive sustained critical attention. Bryan Alexander’s chapter in the 2014 edited collection *The Gothic World* uses the term “cybergothic” as “a way of looking at the suddenly digital world, representing it as a space of horror and the uncanny” (Alexander 151).³² As the “cyber” in “cybergothic” indicates, the chapter’s main focus is on virtual environments, and Alexander finds that examples from contemporary literature and film offer a redeployment of the gothic which “translates the trope of haunted or fearsome space to cyberspace” (Alexander 143). This is not always an obvious route; tracing examples of “cybergothic” in the 1990s, Alexander concedes that few of the texts he mentions refer specifically to the internet:

Few explicitly single out the web as story material. Instead, they mobilise various periodic technologies, including surveillance

³¹ Wozniak’s sense of an underlying fear dominating these “pairings” differs significantly from Donna Haraway’s more celebratory conception of the computer user as “cyborg”, where the individual is fundamentally altered by interaction with technology as they unknowingly assimilate aspects of the machine. See Haraway, *Simians, Cyborgs and Women* (2013), and Plant, *Zeros + Ones: Digital Women + the New Technoculture* (1997).

³² Fred Botting considers cybergothic the natural legacy of gothic fictions: “As gothic cedes to cybergothic,” he suggests, “gothic shapes occlude a darker and more destructive romantic flight, a return, not from the past, but from the future. Drawing on the images of ruined urban centres, wasted bodies and wired minds from the cyberpunk fictions and film (*Neuromancer*, *Blade Runner* and *Terminator*), ‘cybergothic’ describes the mechanic economic and biotechnological systems that have escaped the control of human agents and institutions.” (Botting, *Gothic Romanced* 58)

hardware, virtual reality and underlying code, developing ideas from the internet upon which the web runs. The web is sometimes instrumental in these works as one communications technology among many, but rarely central to a cybergothic tale. (Alexander 150)

Alexander's statement notes a tendency to displace discussions of contemporary technology onto "periodic" ciphers and analogies, exemplified by science fiction and cyberpunk narratives which interpret contemporary concerns via fictionalised scenarios set in the past, future, or alternative worlds. My own approach, on the other hand, is focused upon imagery of computing technology drawn from personal authorial experiences, or at least portrayed as such. Unlike the uncanny virtual worlds discussed by Alexander, the texts I consider in this chapter conceive the machine as if it is an unnetworked entity, encountered on a one-to-one basis with no sense of the web's virtual realm opening up beyond the screen.³³

As I've already noted, the computers described and used in the texts I discuss here are everyday individual tools rather than gigantic systems. Despite this reduction of scale, however, the use of imagery to capture the ramifications and difficulties of interacting with computing technology relates precisely to the attributes of "cybergothic" or "digital gothic" defined by Wozniak and Alexander. Concerns with uncontrolled processes and difficult "electronic" spaces are repeatedly expressed via imagery familiar from gothic tropes and themes, tending to offer elaborate explanations for the computer's processes. My analysis in this chapter demonstrates that notions of "haunted or fearsome space" are not only applicable to the expansive realm of cyberspace. They can also be related to the internal space of the computer-as-object, a way of acknowledging how the computer's "mysterious innards" (Shea 17) power the "miracle of the electronic screen" celebrated elsewhere by Brathwaite. Nor are such accounts restricted to fictional portrayals; rather, they are also found in popular and critical references to computing technology. For example, my reference to "mysterious innards" is

³³ I do not mean to suggest that such expanding networks do not exist in the scenarios described, but rather that the computer is envisaged as an individuated entity, an object whose obscure processes are particular to itself as a standalone object. As Servan-Schreiber and Branfman put it, "it is the individual's access to independent computer power—not a terminal hooked up to a mainframe—that marks the beginning of this new era, one that will ultimately affect every aspect of human life" (Servan-Schreiber and Branfman, "On the Computer Revolution" 580)

drawn from a 1983 article in the computing magazine *Infoworld*, where Timothy Shea tackled the difficulties of comprehending “computer memory” for those new to using computing technologies:

For complete computer novices, the concept of computer memory is one of the hardest and most frustrating things to learn about computers. Without paper and pencil to anchor the information down, it's hard to visualise exactly where that text glowing on the computer screen *lives*. Where does the data exist? What does it mean to “save” data? When can you really count on it being saved? Once you've put something into memory, can you get it back out, or will you lose hours of work in the mysterious innards of a complex machine only engineers understand? (Shea 17)

Shea's account anticipates several key images and concepts important to this chapter. As they figure the computer as a mysterious and incomprehensible inner space, each of the authors I discuss examines the functioning – and failing – of computer memory in comparison to idea of spatial location and “living” human memories. The concerns expressed in these fictional and semi-autobiographical accounts echo the rhetoric of discussions of “novice” approaches to the computer. Shea's notion of paper and pencil as “anchor” relates to Kamau Brathwaite's sense that tangible objects enjoy a security and safety not shared by their “onscreen” equivalents. Similarly, Shea's text “glowing on the computer screen” anticipates a multitude of references to the “illuminated screen”, as in Kirschenbaum's *Mechanisms* (Kirschenbaum 30). Finally, the machine's “mysterious innards” – understood, Shea muses, only by specialist “engineers” – offers a precursor to the portrayal of the body-as-computer in parts of Shelley Jackson's *Patchwork Girl* as well as the imagery of the computer-as-body in Neal Stephenson's account of a computer crash, where he likens the failed computer to a broken female corpse whose underlying imperfections and fragilities are revealed after it has been mangled by accident and autopsy. Each of these instances represents an attempt to conceptualise processes which are simultaneously visible – through their effects, displayed on the computer's screen – and invisible, hidden in the “mysterious” workings of software and operating systems.

In his 1993 collection *DreamStories*, Kamau Brathwaite offers a vivid description of his own struggle to comprehend the “mysterious innards of a complex machine” (Shea 17), when a story he has typed on the computer suddenly appears to be “wiped out” (Brathwaite, *DreamStories* 55). Brathwaite’s preface to “Dream Chad: A Story” expresses sensations of disorientation and bewilderment, capturing the emotional and affective ramifications of computer malfunction. The preface recounts the author’s struggle “w/ the composition” of the tale of a dream he has had, typed onto a borrowed computer. Just as the story nears completion, the writing process is stalled by an unexplained malfunction:

[A]s I was finishing this story – before, in fact, I cd print it out – the machine shall we say *malfunctioned* and I lost nearly all its oratory & I had to reconstruct it all again from scratch & each time I came to the end & was about to run it off, the same strange **deconstruction** occurred – loss of < text/wiped out of the machine. (Brathwaite, *DreamStories* 55).

The computer’s malfunction performs a refusal of fixity, appearing to reject the possibility of “finishing” the story. The impermanence of the text as it is displayed onscreen is emphasised by Brathwaite’s description of it as “oratory”, and the suddenly disappearing text recalls Ong’s characterisation of words spoken aloud as “not simply perishable but essentially evanescent” (Ong 32). Ong’s statement posits a binary distinction between oral performance and printed inscription, contrasting the durable inscription of writing with the ephemeral instant of spoken word. Here, the seeming “evanescence” of computer-based text is made doubly emphatic by Brathwaite’s emphasis on timing, where the text disappears in the very moment that its author “came to the end” and attempted to mark this sense of completion by converting it to a more conventionally “safe” and fixed form.³⁴

Ong argues that acts of inscription are a means of supplementing human

³⁴ Torres-Saillant offers a reading of “Dream Chad” which suggests Brathwaite’s typography deliberately avoids impressions of fixity: “In ‘Dream Chad’ we come upon alternating small and large print, words in boldface and italics, several fonts competing on the same page. The visual noise caused by the graphics perhaps accords with the emotional tension of the narrator, who at the beginning struggles to compose a story that the computer’s mind, “some spirit in the machine”, insists on erasing and ultimately transforming”(Torres-Saillant, “The Trials of Authenticity” 701)

memory, and Brathwaite's representation of the machine's malfunction is alert to the differential between human memory and this means of supposedly durable inscription. The computer's seemingly wilful resistance leads to a reversal of roles, in which Brathwaite contrasts the failures of computer "memory" with the "art" of the human author. When the computer's capacity to store and record words is rescinded without warning, it sparks the writer's ability to recreate, his memory "miraculously working" in a way which mimics the expected function of the computer, as he "stubbornly" attempts to recreate the text:

& each time – *is here I remember the < HEAT* – I stubbornly
construed it again, my memory miraculously working almost like a
computer itself (my ART, I felt, vs hear(t)*less TECHNOLOGY)*.
(*DreamStories* 55)

The description of this small-scale but emotive battle contrasts the human's urge to create with the computer's apparent determination to delete. As "hear(t)*less TECHNOLOGY" appears to flaunt its disinterest in the poet's creative purpose, the language of "miracle" is reassigned from the "miracle of the electronic screen" described in the previous chapter. No longer an attribute of the suddenly recalcitrant machine, instead the "miracle" becomes the poet's own mind, "miraculously" working in imitation of the perfectly accurate storage capabilities usually associate with the computer.

Brathwaite's distinction between the supposed perfection of computer memory and the relative unreliability of human memory is a staple of commentaries on computing and writing. Hayles observes that "human memory, unlike computer memory, does not retain its contents indefinitely or even reliably" (Hayles, "Flickering Connectivities" n.pag.), while Derrida finds that "the deficiencies of my memory" can be supplemented by "written notations" (Derrida, *Paper Machine* 65). However, although he sees a distinction between "the era of paper" and "the multimedia technologies of writing that are completely transforming our existence," Derrida confesses that for him, the possibility of "absolute memory" is still tied to paper inscription, as his "imagination continues to project this archive on paper" (Derrida, *Paper Machine*

65).³⁵ Brathwaite's story portrays a similar perception of paper as a fixed and stable medium. After each re-composition of his story, he again attempts to print it out, hoping to restore his words to the perceived "stability" of a physical medium.³⁶ Ignacio Instante argues that the process of "writin in light" divorces the writer from the tactile immediacy of material production:

Brathwaite's poetry can only exist as SycoraxVS once the poetic voice has been subjected to the performativity of the computer code that enables the mechanical processing of the poem's words to be translated into the visual images that appear in the monitor of Brathwaite's own Mac SE/30. One of the key theoretical implications of such a process of digitization is that Brathwaite's vernacular articulation of the "West Indian voice" is ultimately constituted as a virtual voice. (Infante 168)

While Infante suggests that Brathwaite's conversion to computer lies in a practical need for "a brand new – and safe – repository for his archives" (168), the obsession with printing the story in "Dream Chad" demonstrates Brathwaite's suspicion of the "performativity" of code and the "mechanical processing" of his words. Once complete – or as Brathwaite puts it in "Dream Chad," "each time I came to the end" – the poems, conversations, stories and recollections are destined to be printed, and thus converted into the rooted tactility of a material text. The importance of this final stage of the process is indicated by Brathwaite's frustration when a printout is prevented. As a result of this inclination toward print, Brathwaite's poetic voice remains virtual only while it is in the process of formation.

The preface to "Dream Chad" reveals a significant discrepancy between theoretical approaches to the ease, "immediacy" and controllability of text and the

³⁵ Derrida's devotion to paper is evident in his comments elsewhere in *Paper Machine*, where he casts it as an original "multimedia": "Paper echoes and resounds [...] Beneath the appearance of a surface, it holds in reserve a volume, folds, a labyrinth whose walls return the echoes of the voice or song that it carries itself; for paper also has the range or the ranges of a voice bearer. [...] Paper is utilised in an experience involving the body, beginning with hands, eyes, voice, ears; so it mobilises both time and space. Despite or through the richness and multiplicity of these resources, this multimedia has always proclaimed its inadequacy and its finitude" (Derrida, *Paper Machine* 44)

³⁶ This is a convention of traditional perceptions of inscribed text. For example, Delany and Landow summarise that "[t]he written text is the stable record of thought, and to achieve this stability the text had to be based on a physical medium: clay, papyrus or paper; tablet, scroll or book" (Delany and Landow, *Hypermedia and Literary Studies* 3).

lived experience of working with a machine to produce and display text. Despite his enthusiasm for the malleable visual display effected on the screen, Brathwaite considers this displayed form as a work in flux, and crucially, one which is “ultimately” destined for the fixed “stability” of print. Brathwaite’s suspicion of the electronic text is based in his experience of what the novelist Neal Stephenson has called a “metaphor shear.” Stephenson argues that the use of metaphorical terms and icons in the computer interface offers a deceptive equivalence to “real world” objects, implying similar levels of materiality and permanence. However, errors and malfunctions prompt the abrupt destruction of this misconception, when glitches and crashes – such as the one experienced by Brathwaite – reveal the illusory nature of that implied materiality. Stephenson chooses the word “document” to illustrate his point:

When we document something in the real world, we make fixed, permanent, immutable records of it. But computer documents are volatile, ephemeral constellations of data. [...] Anyone who uses a word processor for very long inevitably has the experience of putting hours of work into a long document and then losing it because the computer crashes or the power goes out. Until the moment that it disappears from the screen, the document seems every bit as solid and real as if it had been typed out in ink on paper. But in the next moment, without warning, it is completely and irretrievably gone, as if it had never existed. The user is left with a feeling of disorientation (to say nothing of annoyance) stemming from a kind of metaphor shear—you realize that you’ve been living and thinking inside of a metaphor that is essentially bogus. (Stephenson n.pag)

As with the views of Bolter, Brathwaite and Birkerts discussed in the previous chapter, Stephenson’s account assumes a fundamental distinction between “ephemeral” electronic texts and “solid” printed ones.³⁷ His differentiation between the tangible paper “document” and the “bogus” metaphors of electronic space emphasises a contrast between the material appearances and behaviour of onscreen texts and their printed counterparts. Like Brathwaite’s account of the computer as an “obeah blox” which can “get a paragraph / write up / and quick”

³⁷ This is a common perception; for example Latham explains that “Unlike a book with a well-crafted index, a digital document exists in an electronic flux which is constantly being dissolved and reassembled for our consumption.” (Latham, “New Age Scholarship” 416)

(*X/Self* 81), Stephenson's description emphasises the rapid changeability of text displayed onscreen. However, whereas Brathwaite's emphasis on technological speed in the texts discussed in Chapter One portrays the computer as an empowering device, Stephenson finds that the computer's speed becomes important in the moment of loss, when the painstaking labour of "hours of work" can be wiped away "in the next moment".³⁸

By lingering on an experience of technological resistance, Brathwaite's story moves away from the emphasis on smooth processing celebrated in the earlier poem "X/Self's Letter". In the earlier poem, the protagonist conceded that his capabilities did not quite match those of technology. For a brief moment in "Dream Chad", the successful rewriting of the poem suggests that this inaequacy has been reversed, as the poet overcomes the obstructive aspects of "hear(t)*less TECHNOLOGY". However, this brief victory is immediately interrupted by "a moment of the most frightening confrontation", when an error alert message suddenly amplifies the poet's sense of technological disempowerment:

[W]hen a MESSAGE came up on the computer screen telling me
that **there was no way that I cd continue the dream since
SOMEBODY ELSE WAS USING IT.**
I was stunned... went like cold as if I was being personally attacked
by some premonition or monitor. (Brathwaite, *DreamStories* 55)

Though it might be explained as a relatively standard glitch – perhaps a generic access issue caused by multiple attempts to relaunch a program – Brathwaite's account reimagines this error message as a moment of crisis. The warning message emphasises the individual's total loss of control over a text he had previously considered his authorial and personal property, an impression enhanced by the poet's careful choice of vocabulary. Describing his inaccessible text as "dream" rather than "story" emphasises the personal connection between author and text,

³⁸ Stephenson's account of a permanently deleted text exemplifies what Matthew Kirschenbaum has called a "medial ideology" (*Mechanisms* 43), where critics base their interpretation of electronic writing on visual and sensory perceptions of the texts they discuss – the display upon the "illuminated screen" – rather than detailed knowledge of how those writings are inscribed and displayed via "inscrutable" processes. Arguing that electronic texts are seldom permanently deleted, Kirschenbaum offers detailed technological explanation of the processes involved for inscription and recording in digital media, suggesting a fundamental distinction between, for example, the visible and immediately accessible version of an email visible in a browser, accessed (and perhaps even apparently deleted) via a user's email account, and the version stored on a server, router, mirror, or automated backup. However, this distinction between immediate displays and inaccessible recordings of electronic texts effectively draws a line between the level of access and perception for expert and inexperienced users.

as if the computer has snatched an imaginative experience directly from his mind and thoughtlessly (heartlessly) attributed it to “somebody else”. In this fragmentary moment, the author is temporarily divested of his capacity for personal creative expression by the very device which has, until now, been his technological enabler. The experience is described as a chilling encounter – quite literally, as the author recalls going “cold” as if faced by a “premonition”. The standard error message is transformed into a supernatural experience, associated with dream and otherworldly communication.

Brathwaite’s tale of encounter with a personified, antagonistic computer in the preface to “Dream Chad” illustrates how a strong sense of personal connection with the computer can be complicated by the disoriented incomprehension prompted by a lack of technological expertise and an inability to understand the causes behind computer-based errors and warnings. Like the “document” described by Stephenson as appearing “solid and real”, Brathwaite perceives a certain enduring materiality for the text he composes onscreen. This is bound up with his proprietorial sense of possession of the text, manifest in his initial confidence that only he is capable of making changes to it. The effect is best expressed in the triumphant sense of achievement conveyed at the end of “X/Self’s Letter” and analysed in Chapter One, where the analogy of the computer screen as a stone face links the textual freedoms enabled by the computer to the author’s growing sense of himself as a “somebody”. However, when the electronic text repeatedly disappears before his eyes, Brathwaite announces an opposite effect: total disempowerment and the enforced relinquishing of control to “somebody else”; a more spectral version of “possession” in which the poet imagines himself at the mercy of “some premonition or monitor” (Brathwaite 55).

In *Haunted Media* (2000), Jeffrey Sconce examines popular tendencies to assign supernatural causes to technological phenomena, as exemplified by Brathwaite’s explanation of the error message as “premonition”. Taking a long view which begins with the spectral associations of telegraphy in the nineteenth century, Sconce questions the enduring appeal of using imagery of haunting and spiritual possession to explain technological phenomena:

In media folklore past and present, telephones, radios, and computers have been... “possessed” by such “ghosts in the machine,” the technologies serving as either uncanny electronic agents or as gateways to electronic otherworlds. [...] Why is it, after 150 years of electronic communication, we still so often ascribe mystical powers to what are ultimately very material technologies? (Sconce, *Haunted Media* 4, 6)

Sconce’s account of “haunted media” is largely preoccupied with television and earlier media technologies, tending to treat the computer as a screenic equivalent to the television rather than a separate phenomenon. Despite this limitation, his account of the reasons for associating electronic media with disembodied presences and unreal worlds is tremendously instructive for my own analysis here. Tracing the cultural associations of “haunted media” from the disembodied voice of the telegraph to haunted television screens, Sconce offers a historical context for Brathwaite’s wish to interpret his computer’s actions and responses through ideas of spirits and haunting. Focusing on electronic media’s transition from the telegraph – described as “a bridge between worlds real and fantastic” – to “the age of television” (18), Sconce finds an enduring perception of ghostly “presence” in the interpretation of technological forms. “From the initial electromagnetic dots and dashes of the telegraph to the digital landscapes of virtual reality,” he argues, “electronic telecommunications have compelled citizens of the media age to reconsider increasingly dissociative relationships among body, space and time” (Sconce 7).³⁹ Sconce is convinced that these are not merely examples of “electronic superstition” (10), but rather a way of expressing “a culture’s changing social relationship to a historical sequence of technologies” (Ibid), and his study offers a compelling conceptualisation of “electronic space” where disembodied sights and sounds are associated with spectral presences.

Comparing users’ approach to personal computers with visceral responses to

³⁹ For Sconce, these are manifested in three “recurring fictions”: uncanny disembodiment, electronic worlds, and the “anthropomorphizing of media technology” (Sconce 8-9), and he traces a transition from the telegraph’s “tantalizing promises of contacting the dead... and aliens of other planets”, to the claim that television broadcasting ushered in an “ambiguous space that merges the real and the virtual, the living and the electronic” (Sconce 178). For example, the ghostly afterimage of 1960s television led to claims of “haunted” screens. Goody finds similar examples in the past, noting that “Tesla and Edison’s inventions, and the media and communication technologies of others, introduced a magical aspect into everyday lives where voices of absent people could be heard, invisible aspects of the body revealed and exotic or strange experiences viewed.”(Goody 8)

the “intrusive, imperious and... living presence of television” (Sconce 3), Sconce finds that “[o]wners of personal computers make similar animating investments in their media” (Sconce 3). In the case of the computer, however, an impression “interactivity and intimacy” tends to “transform the machine into a friend and confidant (albeit one with which we occasionally have a stormy relationship)” (Sconce 3).⁴⁰ This is certainly true of Brathwaite’s representation of animation and possession in “Dream Chad”. Re-interpreting the causes and prompts for unexpected computer processes, Brathwaite complements ghostly imagery of haunting, warnings and possession by anthropomorphising the machines which do perform as expected, rendering the computers more literally “personal”. In “Dream Chad”, the misbehaviour of the malfunctioning borrowed computer is contrasted with two other, more companionable devices, and Brathwaite’s account frames his interaction with these companionable machines as anchored by personal, emotional connection. Before the appearance of the deleting computer, Brathwaite sets the scene by describing an earlier machine which had featured as the poet’s heroic companion in “dark” times:

[M]y Eagle Computer which had been such a wonderful companion for me during and after the dark of my wife Zea Mexican’s sudden unexpected & finally fatal illness & aftermath & I had left the computer like a kind of emotional anchor or icon. (Brathwaite, *DreamStories* 54)

This account of a relationship between writer and computer is suffused with the narrator’s sense of loyalty to the computer as tool, possession and “companion”. Instead of functioning as a conventional storage device, the computer is cast as “a kind of emotional anchor”, thus imbuing its physical presence with symbolic significance even when it is not in direct use. In Brathwaite’s description, difficult technological encounter is familiarised by associating the uncanny possibilities of an imagined spectral possession with the reassuring safety of the computer as a “wonderful companion”.⁴¹ The computer can be perceived as a “friend and

⁴⁰ Sofia agrees, noting that “[a]nthropomorphic tendencies are particularly prevalent in artificial intelligence, where the computer is invested with powers of reason and to some extent with its own ‘personality’. Even users of word processors develop alterity relations with and become defensively fond of their chosen computer programmes” (Sofia, “Virtual Corporeality” 62). Cf Don Ihde, *Bodies in Technology* (2002), and Davis’s concept of “techno-animism” in *Techgnosis* (225).

⁴¹ Describing the juxtaposition of the uncanny with technological objects, Botting finds that “the uncanny is, in

confidant” because “the computer (and other operators) can now speak directly to us (and we to them) in an immediate electronic interface” (Sconce 3). For Sconce, the “liveness” encouraged by this scenario leads to “a unique compulsion that ultimately dissolves boundaries between the real and the electronic” (Sconce 3). In Brathwaite’s case, recognition of this “liveness” is manifested via reference to spiritual communication, where the “real” environment is briefly relegated in favour of an “electronic presence” (Sconce 6) which is directly related to his own psyche, strongly associated with the “dream” he is attempting to transcribe.

Rhonda Cobham-Sander argues that Brathwaite’s development of a strong emotional connection with the idea of computing is rooted in the poet’s sense of loss and disorientation in the “first terrifying months” (Cobham-Sander 199) following his wife’s death. As Brathwaite recounts in his memoir, *Zea Mexican Diary*, Doris Brathwaite (called “Zea Mexican” by her husband) had been a tremendous technophile, an “early adoptor” of personal computing who took sole responsibility for typing her husband’s works onto her computer. Cobham-Sander echoes the bodily imagery of Timothy Shea’s reference to the computer’s “mysterious innards” when she relates that after his wife’s death Brathwaite found himself “incapable... of even retrieving his words from the bowels of her computer” (Cobham-Sander 199). Yet she goes on to suggest that his “subsequent mastery of the computer... gave him new access to the qualities of nurture and preservation he associated with his wife’s support of his artistic project” (203). Nielsen suggests that Brathwaite’s veneration of the computer as “emotional anchor or icon” accrues meaning as a symbolic link to the final days of his wife’s life:

Brathwaite was left bereft, alone with his memories, with her belongings and their lingering aura, and with her beloved Kaypro computer. Readers of a certain age may recall the 1980s Kaypro, with its array of commands one must remember and invoke to coax the machine towards one’s goals at a time when the more user-friendly graphic interface was just becoming more widely available... As the poet looked at that machine following her death, how could he not but be deeply affected by the realisation that her relationship

many ways, a technological phenomenon whose effects are accentuated by the shifts and disturbances of technical innovation. (Botting, “Limits of Horror” 108)

to that machine had become a part of her relationship with him.
(Nielsen, “*Ancestors and Words Need Love Too*” 228)

In the synthesis of Zea/Doris’s “lingering aura” with her “beloved computer”, the poet’s gradual mastery of his wife’s computer’s indecipherability becomes aligned with a process of slow “cathexis” (Cobham-Sander 203), and Cobham-Sander argues that Brathwaite’s naming of his first computer also maintains an association with his wife. She suggests that “in calling his first computer – her computer, really – “Sycorax”, Brathwaite brings together the creative and destructive aspects of the strength he associates with Zea and with electronic memory” (Cobham-Sander 204).

Brathwaite’s personification of his Eagle computer assigns it specific emotional impulses, which re-emerge as an additional explanation for the error “attack” described above. The contrast between this companionable earlier computer and the “hear(t)*less” machine now refusing to preserve his words prompts an escalation in Brathwaite’s language of interpersonal relationships, as the poet fears that the source of the error message “was somehow the EAGLE – jealous because I was into a Ma(c)*?”. The tangled emotions here are rooted in the confusion during and following the “dark” of his wife’s fatal illness, where the Eagle computer is illuminated as a “wonderful companion,” its sentimental resonance emphasised by the revelation that it has been left behind as an “anchor or icon,” along with the author’s “archives” and “artifacts”. Brathwaite’s personification of technological objects as “companion” tends to imbue the computer with an emotional charge which both reflects his own contemplative state and offers explanations for processes, glitches and errors which he cannot otherwise explain. These personified computers are not HAL-style sentient beings, nor does Brathwaite seek to reference conventional ideas of artificial intelligence. Instead, the computers are described in terms of affection and trust, using vocabulary of close interpersonal relationships, as in Brathwaite’s announcement of the subsequent development of “a very close relationship w Apple/Mac” (*DreamStories* 55). As Cobham-Sander and Nielsen imply, both computers – and the work produced upon them – are presented as a salve for the loss of Brathwaite’s life companion, his deceased wife. Between these two fondly

described devices, the malfunctioning computer which threatens to thwart the composition of “Dream Chad” is cast as an interloper. It is a borrowed machine, and its processes can only be made familiar by deploying ideas of spiritual possession to link it with other, more companionable devices. Brathwaite’s account theorises the individual’s seeming loss of control by replacing the technological encounter with a spiritual framework.

Neal Stephenson uses similar metaphors of personification to describe computer breakdown in his essay “In the Beginning... Was the Command Line”. Like Brathwaite, Stephenson deploys imagery of emotional relationships to capture the “disorienting” effect of encountering a “loss of text” composed on the computer. Recounting his computer’s permanent crash and consequent loss of data, Stephenson uses the hyperbolic language of passionate, doomed romance to recall how his “personal love affair” (Stephenson n.pag.) with Macintosh computers ended on a “particular day in the summer of 1995”. Stephenson’s personal horror at this revelation of his computer’s technical vulnerability finds expression in similes of flesh and blood as he announces that the experience “broke my heart”:

[T]wo different Mac crash recovery utilities were unable to find any trace that my file had ever existed. It was completely and systematically wiped out. We went through that hard disk block by block and found disjointed fragments of countless old, discarded, forgotten files, but none of what I wanted... It was sort of like watching the girl you’ve been in love with for ten years get killed in a car wreck, and then attending her autopsy, and learning that underneath the clothes and makeup she was just flesh and blood. (Stephenson n.pag.)

Stephenson’s emotive language seeks to express a personal connection with the mechanism of his computing device, implying a relationship which is not only based on a sense of personal empowerment, but also in trust that the machine will cherish and protect the author’s works. His essay deploys the hyperbolic simile of harmed human flesh to emphasise his interpretation of the machine’s malfunction as a revelation of weakness; significantly, this is expressed via the revelation of an underlying structure of “flesh and blood” in place of the cosmetic indicators of

“clothes and makeup”. The author’s imagery of a broken female body expresses a perceptible gulf between an appearance of perfection and the revelation of breakability, as the computer’s fallibility is expressed in visceral terms.

The moments of computer malfunction portrayed by Brathwaite and Stephenson illustrate a complex combination of admiration and distrust of electronic inscription which had considerable credence during the late 1980s and early 1990s. As computers became easier to use, they also became more difficult to understand. Stephenson argues that the introduction of icon-based systems of Graphical User Interfaces (GUI) simplified computing processes at the expense of users’ ability to interpret functions and troubleshoot errors, where increased usability also intensifies “system opacity”. GUI introduces “a metaphor of direct manipulation of graphical images and widgets” (Kumar 43), and the icon-based system is widely understood to render computing technology more immediately accessible for novices.⁴² Comparing his own adulation of early Macintosh systems to teenage admiration of a fast and powerful car, Stephenson acknowledges that the slick interface of GUI computing can give the appearance of great power and flexibility. However, he finds crucial problems with the promises made by this visual display. Although Stephenson agrees that the transition to GUI made computing processes significantly more accessible to non-expert users in the 1980s, he associates perceptions of these “surface” processes with incomplete and superficial levels of understanding. As in the case of the malfunction described by Brathwaite, the appearance of simplicity can mask an insufficient or incomplete understanding of the processes involved.

Referring to Stephenson’s thoughts on GUI, Hayles infers that the graphical interface’s effect is “misleading” because it “hides the operations of the machine behind an interface that discourages the user from understanding how the actions of a mouse, for example, get translated into binary code – or even that they do get so translated.” (Hayles, *My Mother Was a Computer* 125). As in

⁴² Kumar states that Graphical User Interfaces “tend to show most or all relevant categories of commands on the display,” and as a result, “users often learn them faster” (Kumar 43). As Kumar, Stephenson and others note, the transition to GUI was also prompted by profit: making systems easier to use opened up a considerably wider market for personal computing. However, Ceruzzi suggests that this ease of use “has led to a new set of frustrations. Users now find interfaces laid over these interfaces, which are supposed to make computing even easier. In fact, they have made things more difficult.” (Ceruzzi 356)

Stephenson and Brathwaite's accounts, the interface may not be "robust" and is thus subject to possible glitches and deletions. Hayles, however, is most interested in another issue which she describes as "more difficult to quantify but perhaps even more important emotionally". This is the concern that using technology without understanding its detailed functionality leads to a failure of control:

The real individual, Stephenson implies repeatedly, would not want to put himself at the [End 125] mercy of large corporations that in effect tell him what to think, deciding what he wants and what is good for him. Such folks are "Eloi", Stephenson suggests, in an allusion to H.G. Wells' classic story *The Time Machine*.⁴³ [...] At issue is pride, expertise, and, most importantly, control. Those who fail to understand the technology will inevitably be at the mercy of those who do. The implication is that those who choose Unix,⁴⁴ even though it is more demanding technically, can escape from the category of the Eloi and transcend to Morlock status where the real power is. (Hayles, *My Mother Was a Computer* 126)

For Hayles, metaphors of "surface" and "depth" are conflated with levels of expertise and inexpertise. The "surface" levels of understanding and engagement represented by Wells' Eloi render them unable to control their own trajectories, while "deep" understanding is associated with "Morlock status where the real power is".⁴⁵ Stephenson's argument, reinterpreted here by Hayles, is that Unix systems' refusal to provide the user with the comprehensible but misleading "surface" display of icons and graphics, prompts a "deeper" level of intellectual and technological understanding among its users. Thus "control" of computing technology is associated with expertise and the willingness to learn how to use technically "demanding" systems.⁴⁶

⁴³ Hayles provides the following gloss to explain the reference to Eloi and Morlocks: "In Wells's story, the Eloi are small-statured folk apparently living gentle lives in harmony with nature. Yet, as the time traveler Hillyer discovers, their lives are forfeit to the brutal and ugly Morlocks, who live below the surface with their superior technology and apparently regard the Eloi as food animals." (Hayles, *My Mother Was a Computer* 126)

⁴⁴ Stephenson's essay concludes by suggesting that the Unix operating system, though difficult to master technically, gives the user a far preferable level of control and understanding than Microsoft or Macintosh's GUI systems.

⁴⁵ These metaphors recur in Hayles' later work on "deep attention": see Hayles, *How We Think: Digital Media and Contemporary Technogenesis* (2012) and my discussion in Chapter Four.

⁴⁶ Hayles's discussion of control and technology echoes Derrida's comments on "techno-mediatic power" in *Spectres of Marx*, where he suggests that it is essential to take into account "so many spectral effects, the new speed of apparition (we understand this word in its ghostly sense) of the simulacrum, the synthetic or prosthetic image, and the virtual event, cyberspace and surveillance, the control appropriations, and speculations that today deploy unheard-of powers" (Derrida, *Spectres of Marx* 67)

Discussing control and access in *Mechanisms*, Matthew Kirschenbaum agrees that an intermediary structure of links and commands fails to provide complete access to underlying processes and data, meaning that the user reliant on this interface has severely limited control. Kirschenbaum chooses the example of the visual metaphor of “directory structures” or the “Find” function in an operating system to exemplify the “surface” understanding of non-expert users. The amateur user’s perception of computing technology manifested through these interfaces is simply “optimized and impoverished, a partial and simplistic window onto the diverse electronic records that have accumulated on the surface of the magnetic disk” (Kirschenbaum 53). Though he disagrees with Stephenson’s account of electronic texts as “ephemeral”, Kirschenbaum shares his exasperation at a conceptual gulf between surface appearance and actual process promoted by the “user-friendly” gloss of many contemporary operating systems. Kirschenbaum’s representation of a “partial and simplistic window” of understanding allowed to the “casual user”, and the anxieties and frustrations prompted by recognition of this “impoverished” level of access, is precisely what propels the representations of difficult encounters with computing technology in the next creative work I wish to discuss, William Gibson’s poem “Agrippa”.

William Gibson’s electronic poem “Agrippa”, produced in collaboration with the publisher Kevin Begos Jr and an anonymous hacker, offers an emphatic performance of “impoverished” access to computing technology, forcing its viewer to recognise the kind of diminished levels of control described above. Originally conveyed on a “diskette” as part of a book project titled *Agrippa: Book of the Dead*, “Agrippa” is a text programmed to delete itself. It was intended to arrive concealed within an artist’s book, created by Dennis Ashbaugh, whose light-sensitive illustrations also gradually fade. The poem’s radical self-deletion offers an exaggerated replication of the kind of restrictions imposed by the “partial and simplistic window” on technological processes defined by Kirschenbaum. The text of “Agrippa” scrolls slowly up the screen, but cannot be scrolled back again, and in the original disk version it was not possible to “play” the poem again. “Agrippa” therefore re-enacts the experience of a “neophyte” computer user watching text seemingly disappear, as described by Michael Heim:

[D]isaster is near. The most elementary case is the neophyte watching in astonishment as the text disappears when scrolled off the screen; some primitive model of storage begins to replace the first sense of irretrievable loss as the user learns to handle the vanishing writing. (Heim 133)

By sidestepping the possibility of storage, “Agrippa” ensures that the “vanishing writing” will, in fact, remain irretrievable. It therefore restores the “sense of irretrievable loss” described by Heim as the experience of the “neophyte”. Watching Agrippa’s text scrolling off the screen and disappearing, a reader is sharply reminded of the limits to their understanding of how this display is effected: like Brathwaite feeling himself “personally attacked” by a machine’s “malfunction”, the viewer of “Agrippa” must accept that if we do know precisely how the text appears onscreen, we cannot take steps to prevent its disappearance.

Kirschenbaum argues that perceptions of electronic text as “ephemeral” – the kind of expectation performed in the self-deletion of “Agrippa” – are illusory, based in exaggerated attention to the way files appear on the computer screen. Seeking to explode any notion that the text one views onscreen is a unique copy, Kirschenbaum maintains that even if a file appears to have disappeared from the computer’s interface, it will continue to exist at the level of data storage. This is because electronic text is necessarily composed by repeated acts of permanent inscription and reinscription:

Practically speaking, most things that are written and transmitted via electronic media are stored and reinscribed. A simple e-mail message may leave a copy of itself on a half a dozen different servers and routers on the way to its destination, with the potential for further proliferation via mirrors and automated backup systems at each site. As storage costs continue to [End 49] plummet, the trend will no doubt be to save more and more data so that the variety of ephemera routinely written to disk becomes ever more granular. Likewise, even the popular myth that RAM is always absolutely volatile, gone forever at the flip of a switch, proves false; there are at least experimental techniques for recovering data from RAM semiconductor memory. While it may be technically possible to create the conditions in which electronic writing can subsist without inscription and therefore vanish without a trace, those conditions are

not the medium's norm but the special case, artificially induced by an expert with the resources, skill, and motive to defeat an expert investigator. (Kirschenbaum 49-50)

“Agrippa” provides an extreme refutation of this statement, and in doing so, it emphasises the experience of an amateur user rather than an expert. Kirschenbaum's comments imply a fundamental distinction between the perception of electronic writing as it appears to an untechnical user, and its material existence in terms of technological processes for creation and transmission. Both the language and structure of the above account emphasises a distinction between user experience and actual process, where Kirschenbaum begins by acknowledging the apparently “simple” nature of an email before unveiling the technical complexity of its multiple proliferations across a range of unseen “servers and routers”, “mirrors and automated backup systems”. Similarly, “popular myth” is contrasted with discrete expert knowledge, in the example of RAM, where the prospect of “experimental techniques” for recovering data undermine a “popular” conception of simple erasability.

By performing a seemingly unstoppable act of self-deletion, “Agrippa” aims to provoke in its reader an experience of frustration and disorientation similar to the emotions expressed by Brathwaite as he recalls his attempt to “save” his disappearing text by rendering it material and static. The problematics of memory storage, reading and re-reading are self-evidently crucial to the poem. Kevin Begos Jr, publisher of *Agrippa*, has stated that his idea for a self-deleting text was prompted by a mischievous wish to undermine institutions' veneration of printed books. Begos claims that the *Agrippa* project was inspired by the tale of a buyer who was “so intimidated by the size/weight” of a book she had purchased that “she hadn't even opened the shipping box—she'd shoved the book under her bed, unopened” (Begos, “Letter to Alan Liu” n.pag.). In the same letter, Begos explains that the prospect of using technology in order to force purchasers to leave “Agrippa” unopened is the aspect of the project that first appealed to him:

I had this flash of an idea—do a ‘book’ on computer disc that presents collectors and museums with an all-or-nothing choice: produce a text on computer disc that self-destructs after one reading.

If collectors/museums want a pure 1st edition, that could only be the unread state. If they choose to read the text, it becomes only a memory, not a tangible physical object to be bought and sold. (Begos, "Letter to Alan Liu" n.pag.)

As with the other texts discussed in this chapter, Begos' statement plays with a distinction between the idea of a volatile electronic text which will exist only in the individual's memory after it has been read, and the "tangible physical object" which has a potential future of exchange and re-reading. "Agrippa" is presented as the ultimate ephemeral text, a timely reminder of the opposition between the text as physical object and its electronic counterparts. It is designed to replicate the process outlined in Brathwaite's preface to "Dream Chad", where a deliberate act of erasure emphasises the importance of individual human memory over inscribed text.

As Kirschenbaum has recounted, the poem "Agrippa" enjoyed a contradictory afterlife subsequent to its initial release in its "all-or-nothing" format on disk. After its release in 1992, the content of "Agrippa" quickly became available as a document shared on forums and listservs, first as a text file and later as a video which replicates the scrolling effect of the original poem. For some years the poem's unintended availability was surrounded by a myth of expert technological resurrection, since its newly reproducible and re-readable status was imagined to be the result of an individual successfully hacking the program, extracting its content and thereby circumventing the poem's supposed self-deletion. In *Mechanisms*, Kirschenbaum unveils an alternative story to the resurrection and distribution of "Agrippa". He finds that the copy of the poem shared on the internet since 1992 was in fact the result of an act of physical transcription, a copy written down from a screening of a video which recorded the poem unfolding onscreen. Kirschenbaum notes the paradox adhering to this supposedly "volatile" (Kirschenbaum 240) electronic text, which is now more widely available and securely preserved than the printed book which accompanied its original release:

As an electronic work designed to efface itself, yet paradoxically one of the most available objects on the Web, "Agrippa" reminds us that

preservation is ultimately a social domain, where actions and agency can serve to trump purely technical considerations.

[...]

That the more overtly physical and forensic object—the book—is also the more obscure is not so much irony as it is a testament to the efficacy of formal information transmission. (Kirschenbaum 218, 236).

Though the poem's replication online is indeed a "testament" to the successes of information transmission, Kirschenbaum's move to contrast the poem's long life with the relative obscurity of its printed counterpart is somewhat disingenuous. Despite being the "more overtly physical" object, the book which enclosed the poem was by no means intended to embody a notion of permanence or longevity. Like its electronic companion-piece, the printed book element of the *Agrippa* project was designed to gradually self-destruct, with pages deliberately constructed so that they would smudge and smear after reading, and light-sensitive photographic plates. It was also published on a tiny and expensive print run, ensuring that very few copies now exist. The printed text's "obscure" nature is a factor of its publication rather than a pure testament to the greater efficiency of "information transmission".

Both components of the *Agrippa* project – book and poem – seek to perform an unpreventable act of self-effacement which draws attention to the reader's inability to control the text's material status. Kevin Begos' description of "Agrippa" as a text which "self-destructs" (Begos, "Letter to Alan Liu" n.pag.) introduces the poem as an electronic object whose breakdown is built-in and deliberate, in contrast to the accidental destruction portrayed in Brathwaite's encounter with machinic deletion in "Dream Chad". Nor is the possibility of erasure and impermanence restricted to either medium of "transmission". In this project, the built-in erasability shared by both print and electronic text deliberately undermines the kind of binary distinction between volatile/fixed texts suggested by Stephenson and Brathwaite. The accelerated self-destruction of *Agrippa's* texts performs a potential erasure which is implicit to all examples of inscription, regardless of physical format. In "Agrippa", the narrator notes the

mutability of paper-based inscription when he contemplates the unreadable inscription on the book of photographs discovered by the narrator:

Inside the cover he inscribed something in soft graphite
Now lost
Then his name
W.F. Gibson Jr.
and something, comma,
1924
(Gibson n.pag.)

As it experiments with lapses of memory and loss of text in its content as much as its format, “Agrippa” replicates processes of opening and revealing concealed information, via the described act of opening and contemplating an old and disintegrating book of photographs. As with Brathwaite, the vanishing electronic text is related to the imperfection of human memory, drawing attention to the insufficiencies of inscribed media as a means of supplementing or replacing that memory. Its formal determination to confound readerly expectations combines with representations of indecipherable text which spill over from the poem itself into the book which originally encased it.

Discussing the perception of indecipherability in *Techgnosis*, Davis argues that “[t]he logic of technology has become invisible—literally, *occult*. Without the code, you're mystified. And nobody has all the codes anymore” (Davis, *Techgnosis* 216). Kirschenbaum agrees, conceding that forms of technological inscription are “normally invisible to human eyes” (Kirschenbaum 29) and are only “meant to be machine readable” (30). Stephenson also contemplates the indecipherability of raw computing language by human interpreters when he explains that the title of his novel *Snow Crash* was based on the visual effect “[w]hen the computer crashed and wrote gibberish into the bitmap” (Stephenson n.pag.).⁴⁷ Stephenson’s reference to “gibberish” anticipates Davis’s argument that human readers are

⁴⁷ Hayles gives a similar example when she observes that “[w]ith electronic texts there is a clear distinction between scriptons that appear on screen and the textons of underlying code, which normally remain invisible to the *casual* user” (Hayles, “Flickering Connectivities” n.pag., my emphasis).

limited by their fundamental incomprehension of computer-based languages. Like the poem concealed within its pages, *Agrippa* plays with, and deliberately confounds, such expectations or presumptions of decipherability. The electronic poem first appeared on a diskette concealed on page 64 of a printed book, and in this location it was surrounded by two neatly printed columns which replicate “the genomic sequence for the *bicoid* maternal morphogen” (*Agrippa Files* n.pag.). This representation of the DNA sequence exemplifies the project’s deliberate interplay with issues of knowledge and expertise. Unless the reader already knows the source of the content or is familiar with the structures of DNA, the text appears indecipherable. Even once the nature of the code is revealed, it remains mystifying. Introducing her discussion of science and literature in the 1990s, Patricia Waugh recalls her “disappointment” on encountering a disk containing the patterns of human DNA:

The disk seemed the perfect symbol for the year 2000. For here was the entire string of three billion letters, arranged in the various combinations and repetitions with difference of the four-letter alphabet, proclaimed as the recipe for creating a human being. [...] Yet as I sat before my computer screen staring with mild disappointment at the incomprehensible runs of variations on C A G T, the syntax of life, it was difficult trying to imagine how anyone might extract from this library of Mendel anything remotely resembling a semantics of the human self. (Waugh, “Science and Fiction in the 1990s” 58-59)

Waugh’s anecdote reveals the gulf between amateur and expert perceptions of a “logic of technology” (Davis 216). As she goes on to discuss, the seeming “alphabet soup” of DNA code has been explained and described by experts for the benefit of interested amateurs, by scientists who “had begun to write like novelists” (60). However, the use of DNA code in *Agrippa* reverses this explanatory trend, reinstating code as fundamentally incomprehensible and rendering the information it contains inaccessible to the non-expert.⁴⁸

Presented without the explanatory context of narrative, the DNA code in

⁴⁸ On the subject of information, Davis adds that “there is so much pressure on information—the word, the concept, the stuff itself—that it crackles with energy, drawing to itself mythologies, metaphysics, hints of arcane magic” (Davis, *Techgnosis* 11). *Agrippa* seeks to harness that “arcane magic” for its own self-mythologisation.

Agrippa draws attention to code's fundamental inaccessibility to non-experts. In doing so, it anticipates the effects of software glitches, computer crashes performed in its self-deleting poem. The use of DNA code – uninterpretable except by expert technologists – anticipates the rhetoric of incomprehensibility in Kirschenbaum, Stephenson and Davis's commentaries on computing technology. The rhetoric surrounding the *Agrippa* project consistently reiterates a desire to confound readerly expectation while drawing attention to specific qualities of both print and electronic texts. "Agrippa" is not only an exercise in challenging the idea of an electronic archive or the stability of electronic texts; it is an attempt to deliberately invoke the emotional frustration of being unable to preserve a text via means which have become customary and expected. By forcing the reader to rely on human memory alone, it calls attention to levels of reliance on inscription – of all kinds – as a means of preserving narrative. The *Agrippa* project's gothic overtones revolve around this sense of deliberate destruction and unintelligibility: it presents a text that can only be glimpsed, descriptions of figures whose names are half-obsured. In the case of the printed book, the electronic poem, and the faded photographs described in the poem, the passing of time implies inevitable decay and the obscuring of information. In this "book of the dead", acts of inscription and the workings of human memory are each revealed to be insufficient as a means of preserving information.

As I have shown, "Agrippa" exults in its status as an unrepeatable reading experience, enforcing the physical impossibility of re-reading by presenting an "all or nothing" choice to the reader (Begos n.pag.). In doing so, it offers a stark contrast to the most prevalent and celebrated form of "electronic" literary publication at the time: hypertext fiction. Michael Joyce, author of *Afternoon: A Story*, widely acknowledged as the first officially published hypertext narrative, considers repetition and re-reading to be crucial aspects of encountering fiction in this new medium. Describing his work as "an attempt to isolate a distinctive quality of the experience of rereading in hypertext", Joyce states that "hypertext fiction depends upon rereading (or the impossibility of ever truly doing so) for its effects" (Joyce, "Nonce" 586).⁴⁹ Whereas "Agrippa" deploys computing

⁴⁹ Rita Raley responds to this claim by asserting that "the general differences in hypertextual writing and reading ("wreading") practices that [Joyce] describes, signified as well with shifts in his own prose, are not obviously

technology to perform a permanent deletion which draws attention to the function – and malfunction – of memory and inscription by denying the possibility of rereading, early examples of hypertext fiction actively insist on repeated encounters with physically identical sections of text. These acts of enforced repetition deliberately emphasise the significance of context and prior knowledge when encountering a piece of writing.⁵⁰

On June 21st 1992, a few months before *Agrippa* was released, the author Robert Coover announced hypertext fiction as a definitive new literary form, in a controversial article titled “The End of Books”. Published in the *New York Times*, Coover’s piece declared that hypertext fiction was a phenomenon promising “true freedom” from what Coover calls “the tyranny of the line” (Coover, “The End of Books” n.pag.). Valorising the newness of the medium in terms very similar to the joyous accounts of computing technology described in Chapter One, Coover’s rhetoric of tyranny and freedom casts the medium of print as “a doomed and outdated technology”, whose conventions are associated with “patriarchal, colonial, canonical, proprietary, hierarchical and authoritarian values” (n.pag.). The hypertext format, by contrast, is hailed as “revolutionary”, and the article ends with a declaration that “[f]luidity, contingency, indeterminacy, plurality, discontinuity are the hypertext buzzwords of the day” (n.pag.). Coover’s use of these familiar watchwords neatly illustrates how vocabulary used to describe hypertext systems as a new way of publishing narrative associated its formal literary possibilities with the perceived physical properties of electronic files, seeking to make a virtue of “fluidity” and “indeterminacy”.

True to its striking title, Coover’s account of the possibilities of hypertext for creative fiction in “The End of Books” is often cited as an emphatic example of claims that this new format would replace printed publication. However, despite a number of sweeping statements about freedom and potential, Coover’s

“new,” and rereading as such can easily be named as inherent to language processing itself.” (Raley, “Reveal Codes” n.pag.)

⁵⁰ These acts of repetition also reflect a fundamental aspect of learning to use technology, according to Michael Heim, who suggests that “the user generally develops an operational interpretation of the system’s inner workings only after first mistaking the system’s procedures. Recovering from errors is the primary resource for learning how to interact with the computer” (Heim 134). The opportunity to recover from errors is precisely what is denied to the reader of “Agrippa”; this is also the case for the works of Young-Hae Chang Heavy Industries, discussed in Chapter Four.

article also contains frequent expressions of doubt and uncertainty relating to initial uses of hypertext as a medium for literary expression. For a start, as often happens in accounts of electronic literature by commentators in the humanities at this time, Coover is quick to concede his own relative lack of expertise in the medium he is describing:

I must confess at this point that I am not myself an expert navigator of hyperspace, nor am I – as I am entering my seventh decade and thus rather committed, for better or for worse, to the obsolescent print technology – likely to engage in any major hypertext fictions of my own. (Coover, “The End of Books” n.pag.)

Though Coover stages this comment as a “confession”, with the faux-humility of advancing years and a wry commitment to the same “obsolescent” technologies whose “end” he is predicting, his announcement deliberately distances him from claims to expertise in hypertext. Throughout the article, Coover tends to report on the responses of others rather than offer up his own views, casting himself in the role of interested observer when it comes to the details of engagement with hypertext. His descriptive tone is playfully self-distancing and laced with rhetorical questions, as when he explains that his interest in the new forms permitted by hypertext led him to teach a course on it – for “what better way to learn than to teach a course in the subject?”. However when he does relate (others’) encounters with the form, Coover repeatedly positions hypertext as a source of discomfort for both writers and readers. Describing his students’ responses to the new medium he notes its troubling unfamiliarity, since “all the comforting structures have been erased.” On one hand, this represents hypertext’s enduring association with ideas of postmodern disruption. However, Coover’s accounts are very specific in linking this discomfort with the difficulties of engaging with the physical and intellectual processes required to navigate a new (electronic) medium.

Although the critical rhetoric around hypertext often describes the reader as empowered by the flexibility of the new medium – freed, as Coover puts it, from “the tyranny of the line” – its format also contributes to sensations of disorientation, boredom, and loss of control. Even devotees and self-professed

aficionados have confessed their discontent or discomfort with initial attempts to read fictions in the format. In his introduction to the collection *Reading Hypertext*, Mark Bernstein offers a candid summary of his own first reading with Michael Joyce's hypertext fiction. On experiencing *Afternoon* for the first time at the first ACM Hypertext Conference in 1987, Bernstein recalls, "I hated it" (Bernstein 1). His reasons combine literary failings with technological limitations:

[T]hat first afternoon, *Afternoon* seemed incoherent and over-written. I read it standing up, squinting at the tiny screen ... What I read was sometimes hard to follow, the interface had too many buttons, the link mechanism seems hard to discover. There seemed no reason to expect *Afternoon* to be good, and every reason to dismiss it as irrelevant and self-indulgent. I clicked rapidly, and didn't understand what I saw – and so I continued to click quickly. (Bernstein 1)

Bernstein's account seems deliberately phrased to offer an insight into the pitfalls and frustrations of encountering creative text in this particular format. The annoyances of the reader's physical discomfort – "standing up", "squinting" – are exacerbated by an unenthralling interface, whose multiple options function as a practical irritation rather than the kind of alluring invitation envisaged in positive accounts of hypertext's multitude of options and various narrative routes. Having found the interface marred by "too many buttons" and links which are "hard to discover", the disengagement Bernstein describes is expressed through inattention, clicking "rapidly" without understanding.⁵¹

Bernstein finishes his anecdote with a positive affirmation, explaining that on his second reading of *Afternoon* he "decided at once to publish it" (Bernstein 1). He adds that the more successful re-reading took place in a calmer setting, "comfortably seated" with "time" and "space", with the additional impetus of having been assured in advance of *Afternoon*'s quality. Aside from the influence of preconceptions and prior assurances, Bernstein's emphasis on physical conditions which enhance concentration – comfort, time, and space – serves to imply the importance of sustained and willing engagement with the mechanisms of the text

⁵¹ For a more sustained discussion of the ramifications of "clicking rapidly" through and between texts, see my discussion in Chapter Four of "a rhythm of attention and distraction" when navigating hyperlinks online (Massumi, *Parables for the Virtual* 139).

in order to enjoy or appreciate it. This is an impression shared by another early denizen of hypertext fiction and theory, George P. Landow. Just as Bernstein advocates taking the time and attention necessary to fully engage with the form and format of hypertext fiction, Landow differentiates the responses of the “neophyte or inexperienced reader” from “more expert” readers of hypertext fiction (Landow, *Hypertext 3.0* 146). Landow’s vocabulary of “neophyte” and “expert” recalls Heim’s account of the potentially disastrous experience of non-expert attempts to engage with word processing technology, with the “neophyte watching in astonishment as the text disappears when scrolled off the screen” (Heim 133). Such portraits of the necessity of expertise are a recurrent theme in critical accounts of literary hypertexts at this time, where descriptions of reading electronic text repeatedly aver that encountering the text in a dedicated electronic setting requires a certain level of technological and conceptual familiarity with the form, which is a learned capability rather than instinctive or intuitive response. Jill Walker, for example, echoes Bernstein’s first encounter in her own initial reading of *Afternoon*, “After an hour or so of frustration I gave the whole thing up. (Walker, “Piecing Together” 22). Only after reading the instructions, rather than “jumping straight into the text” (22) does she find herself able to appreciate the work.

As demonstrated in the above accounts, readers of hypertext in the early 1990s found that the repetitive nature of the text was compounded by the necessity of reading via interfaces which could be confusing and overwhelming.⁵² Though the format and context is different, such experiences resonate with the kinds of user uncertainty described by Brathwaite and caused by “Agrippa”, where glitches and breakdowns emphasise the user’s status as an amateur attempting to overcome the “opacity” of a baffling and seemingly recalcitrant system. Bernstein’s account is instructive here: he recalls being put off reading *Afternoon* because it

⁵² Selig notes the necessity of “unusually repetitive readings, clicking, and scanning to interpret [hypertext’s] often-repetitive patterns of screens” (Selig, “The Endless Reading of Fiction” 642), while Gifford-Brooke observes that “hypertext requires a more active reader, one who is capable of generating and keeping in mind the context for each screen, page, or node of the hypertext” (Gifford Brooke 256). Foltz, meanwhile, finds that “Hypertexts can cause an additional processing load by making the reader responsible for navigating the text. Skilled readers, who can process the text automatically, will not have as much interference from the controlled processing task of having to make choices of where to go as they read. Readers with poor reading skills are using a lot more controlled processing and thus will likely have a greater amount of interference from the additional task of navigating the text.” (Foltz 119)

seemed “incoherent”, “hard to follow”, and it was “hard to discover” links for navigation. For Bernstein, this perfect storm of conceptual incoherence and practical unnavigability prompted intellectual disengagement. The problems of disorientation, confusion and frustration arise from readers’ attempt to make the text cohere in a way which appears meaningful. Since hypertext fictions frequently build meaning through a process of repetition and re-reading, the format relies on the reader’s willingness to invest time and intellectual energy in order to navigate the information presented. Jill Walker acknowledges the importance of repetition when she asserts that “[r]epetition is used both to disorient the reader and to help the reader find patterns” (Walker 33). In the case of Joyce’s *Afternoon*, Walker interprets effects of readerly disorientation as a way of enacting the emotional state of the story’s central character, arguing that “the disorienting and clarifying forces in *Afternoon* are tightly connected with the content of this story”, because “the confusion we feel as readers trying to piece together the story is very like Peter's frenzied hunting for his son” (Walker 33).

Shelley Jackson’s hypertext fiction *Patchwork Girl* successfully thematises the disorientation of a fragmentary reading experience. In an early section, the reader is told that he or she must “resurrect” the protagonist’s story, but “piecemeal”:

I am buried here. You can resurrect me, but only piecemeal. If you want to see the whole, you will have to sew me together yourself. (In time you may find appended a pattern and instructions—for now, you will have to put it together any which way, as the scientist Frankenstein was forced to do.) Like him, you will make use of a machine of mysterious complexity to animate these parts. (Jackson, *Patchwork Girl*)

As Landow notes, this statement cleverly suggests tactics and techniques for reading the work, inviting the inexpert hypertext reader to treat the experience as an affective replication of the narrator’s own confusion and disorientation. Landow suggests that *Patchwork Girl*’s inclusion of veiled and direct instructions “makes us all into Frankenstein-readers stitching together narrative, gender, and identity” (Landow, “Stitching Together” 121). Just as Walker observes that “the

confusion we feel as readers trying to piece together the story” replicates the central character’s frenzied chase in *Afternoon, Patchwork Girl* openly aligns the reader’s painstaking and repetitive route through the text with the narrator’s own search for identity. Landow suggests that “in emphasizing the way her readers have to start out without a map or plan,” Jackson “playfully prepares us for the gaps and jumps we shall have to make” (Landow 121). These veiled instructions to the reader make an aesthetic virtue of disorientation and uncertainty. By conflating the protagonist’s own search for wholeness with the readerly process of constructing the text in the mind, *Patchwork Girl* thematises the difficulty amateur users might find in navigating the text.

Landow’s focus on veiled instructions to the reader in *Patchwork Girl* casts the hypertext as a way of developing reading practices and engagement with the “digital information regime”. For Landow, *Patchwork Girl* provides an introduction to the concepts and reading of hypertext, and he casts it as a route into the kind of “expert” understanding he advocates as necessary for appreciation of hypertext fiction. In Landow’s account, the text occupies an important position as a fictional/introductory work at an “early stage” of interaction with digital technologies:

Sooner or later all information technologies, we recall, have always convinced those who use them both that these technologies are natural and that they provide ways to describe the human mind and self. At the early stage of a digital information regime, *Patchwork Girl* permits us to use hypertext as a powerful speculative tool that reveals new things about ourselves while at the same time retaining the sense of strangeness, of novelty. (Landow, “Stitching Together” 126)

Landow venerates the “sense of strangeness” associated with computing technologies, suggesting that part of *Patchwork Girl*’s appeal is its success in “retaining” this impression of “novelty”. Although he is correct to point out Jackson’s effort to thematise strangeness and disorientation, Landow’s comments also imply a level of authorial certainty and accomplishment which is not always evident in the text itself. Though the reconstructive acts required by the reader to

piece the narrative together are introduced as productive, glimpses of the author's approach reveal a more complex reaction which harks back to Coover's imagery of "getting lost". In *Patchwork Girl's* few direct references to the computer as a space for composition, the comments contain traces of authorial frustrations with the medium.

Wozniak suggests that among the most significant gothic resonances in electronic fiction are "archetypal spatial metaphors of the gothic, the house with its labyrinthine passageways, rooms, and secret closets" which "have been transferred to computer architecture" (Wozniak n.pag.). She argues that "[t]he narratives of electronic literature happen on the site of the computer both literally and figuratively, on the physical hardware of the machine as well as in the imagined places of software and cyberspace" (Ibid.). Spatial metaphors of becoming lost in a figurative space of baffling scale and depth certainly find emphatic expression in fictional depictions of writing and reading hypertext fiction. When one of the narrator-figures in *Patchwork Girl* offers a glimpse into her process of authorial composition using the hypertext software Storyspace, she describes herself endeavouring to establish her place in an as-yet unstructured series of figurative possibilities. In the section of *Patchwork Girl* titled "Body of Text", the narrator uses the metaphor of limited vision to describe the process of "navigating" an electronic space, where she finds herself "half-blind":

Assembling these patched words in an electronic space, I feel half-blind, as if the entire text is within reach, but because of some myopic condition I am only familiar with from dreams, I can see that part most immediately before me, and have no sense of how that part relates to the rest. (Body of Text: This Writing)

Rather than refer to composing or writing "patched words in an electronic space", the author/narrator describes herself as "assembling" them, thereby denying a role, in this particular moment, as a solitary creator. The account of visible "parts" of text separated from, but somehow related to, "the rest" creates the impression of a ghostly text lingering outside the purview of the narrator, already in existence but not yet (and possibly never to be) formed into a larger whole. Like the "lost" readers of hypertext fiction described by Coover, the author/narrator insists on

the existence of a larger body of text which will render potential meaning, assuming that “the rest” exists even though it is imperceptible. However, unlike those who have the option to “click quickly” in an attempt to make sense of sections by formulating their place amongst “the rest” of a larger narrative, this writer/reader is hampered by the necessity of concentration on each “part” as an individual segment. Close attention to the partial view afforded by the format of the text’s display upon the computer screen leads to a “myopic condition” which recalls Heim’s definition of “system opacity”, where the “phenomenon” of word processing “will always remain partially hidden” (Heim 131) and “the writer has no choice but to remain on the surface of the system” (Ibid 132).

Echoing the perceived mysteries of computer storage, the hypertext structure in *Patchwork Girl* is offered as a space which is simultaneously physically contained – on disk, in computer memory – and endlessly expansive in terms of its conceptual and informational content. The recurring metaphor of partial visibility aligns the sometimes difficult and frustrating aspects of encountering electronic text with fundamental uncertainties involved in interacting with computing technology: the difficulty, for example, of being certain about the continuing existence of unseen files consigned to the computer’s “mysterious innards” (Shea 17), or the glimpses of underlying processes offered by standard operating systems as “a partial and simplistic window” (Kirschenbaum 53). In *Patchwork Girl*, the impression of the screen as offering only a “partial” window on a body of text is related to metaphors of spatial disorientation, where the reader’s uncertainty at finding her “place” in the text is described as a direct result of the obscured nature of the computer’s methods of storage and display of information. The seeming invisibility of material stored “offscreen” – and therefore imperceptible except when it is “immediately before” the reader – contrasts with the act of reading a conventional printed book held in the hand:

When I open a book I know where I am, which is restful. My reading is spatial and even volumetric. I tell myself, I am a third of the way down through a rectangular solid, I am a quarter of the way down the page, I am here on the page, here on this line, here, here, here. But where am I now? I am in a here and a present moment that has no history and no expectations for the future. (“This Writing”)

This statement expands the idea of a larger body of text which can only be dimly perceived by the “half-blind” reader in the electronic environment. When reading hypertext fiction, Jackson suggests, the reader is denied any material evidence that the part of text immediately before her is only one part of a larger whole. In the case of the printed book, the existence of “the rest” of the text, and the reader’s progression through it, is indicated by the book’s physical size and scale.

Neither scenario offered by Jackson can offer the reader direct or immediate access to the textual content, since the page is no less partial a “window” on the larger text than the screen. However, the volumetric solidity of the book at least indicates the possibility that “the rest” may indeed exist, though there is no guarantee that any other text encountered will be relevant or comprehensible. If the final line – “but where am I now?” – seeks to claim that reading onscreen in the fragmentary format of hypertext fiction involves “no history and no expectations for the future”, then it defies the possibility of reading electronic text as a “myopic condition”, since a reader who genuinely has no sense of “history” (words read already) and no expectation of “the future” (further words to come), can have no notion of the text currently displayed onscreen as part of a larger whole. In this scenario, the reader would have no reason to consider themselves “half-blind” due to an inability to conceive “how that part relates to the rest” (Jackson, *Patchwork Girl* “Body of Text”). Thus *Patchwork Girl* navigates between the expectations of a reader accustomed to navigating larger, cohesive texts, and the actual evidence displayed onscreen as each “part” of the hypertext format is unveiled.

Katherine Hayles reads Jackson’s account as an illustration of how hypertext fiction renders ideas of linear narrative chronology “inherently tenuous because linking structures leap across time as well as space” (Hayles, “Flickering Connectivities” n.pag.). In fact, Hayles rebukes the description of the printed book as a more “restful” reading experience, noting that “there are of course notable exceptions” to ideas of the book as chronologically “solid”. Citing Robert Coover’s “print hypertext” *The Babysitter* as an example, Hayles suggests that the narrator’s claim to a printed book’s narrative restfulness relies on her “[c]hoosing

not to notice such experimental print fictions” (Hayles, “Flickering Connectivities” n.pag.). Hayles’s analysis makes sense in relation to other references in *Patchwork Girl* – for example the assertion that “history is only a haphazard hopscotch through other present moments” (Jackson, *Patchwork Girl* “Body of Text”). However, her commentary conflates references to physical form and narrative style in a way that the above quotations do not invite. If the references to “volumetric” and “spatial” qualities are taken literally, rather than awkwardly transformed into unwieldy metaphors for narrative structure, the statements about reading hypertext reveal a significant undercurrent of anxiety about the presence, or lack of presence, of electronic text when it is not displayed “immediately” onscreen.

Coover’s article offers an eloquent summary of the difficulties inherent to engaging with hypertext as a new technical format. Hypertext emerges as a “frequently frustrating” way of both writing and reading narratives (Coover n.pag.), and he emphasises sensations of confusion and exhaustion from the physical and emotional strain of engaging with the *spatial* properties of hypertext fiction. “The structuring of the space can be so compelling and confusing as to utterly absorb and neutralize the narrator and to exhaust the reader”(Coover n.pag.), he asserts. “Venerable novelistic values like unity, integrity, coherence, vision, voice seem to be in danger... How does one judge, analyze, write about a work that never reads the same way twice?” (Coover n.pag.). In Coover’s account, hypertext fiction invites its reader into a labyrinthine and infinitely repetitive world of textual links and associations.

Contrasting with the exaggeratedly limited and controlled performance of “Agrippa”, the “interactive” aspects of hypertext provide a multitude of ways of navigating and responding to a work, and therefore offers a different kind of disorientation for both writers and readers. Susana Tosca agrees when she observes that “hypertext fiction generally plays with disorientation as an aesthetic effect” (Tosca 271), and in *Patchwork Girl* this is manifested in the emphasis on each section of text as a potentially separate entity, divorced from the scope of a “monstrous chain”. Silvio Gaggi’s analysis of the difficulties of “location” for a

reader encountering hypertext fiction seems to echo Jackson's portrayal of a disorienting space:

When reading a printed text, the reader always knows at least what page he or she is on and what page comes next. But when a reader gets lost in a hypertextual labyrinth of nodes and links, that reader really is without bearings... When there is no map provided, the reader must explore the text the way one explores a labyrinth, slowly building a mental map of the structure, or at least a portion of it. (Gaggi 122)

The prospect of being left “without bearings” emphasises the spatial metaphors often associated with hypertext fiction, where the reader is imagined as an individual making their way through a “labyrinth” of possible narrative options. This is alternately presented as a source of anxiety for both writer and reader, and an aesthetic necessity as a means of truly representing the fragmentary experience of the narrator herself.

As intimated by Coover's assertion that text “has lost its canonical certainty” (Coover n.pag.), critical and theoretical responses to hypertext fiction frequently relate the idea of “disorientation” to its literary format rather than technological processes. George P. Landow references Jeff Conklin's term “*disorientation problem*” in his discussion of how ideas of disorientation intersect with the use of “spatial, geographical and travel metaphors to describe the way users experience hypertext”.⁵³ Citing Conklin, Nielsen and others, Landow observes that disorientation is “conceived by these authors as crippling and disabling” (Landow, “Reconfiguring Writing” 90). However, he suggests that the solution to this sensation of disorientation lies with increased expertise, arguing that “expert users of hypertext do not always find the experience of disorientation to be particularly stressful” (Landow, “Reconfiguring Writing” 90). Instead, readers can find disorientation “pleasurable, even exciting” (Landow, “Reconfiguring Writing” 91), a response which Landow aligns with famously “difficult” canonical literature:

⁵³ Landow also cites Kenneth Utting and Nicole Yankelovich's statement that “Hypermedia... has the potential to dramatically confuse and confound readers, writers, teachers, and learners” (Quoted in Landow, “Reconfiguring Writing” 89).

Although the kind of pleasurable disorientation that one finds in Dante's *Divine Comedy*, Browning's *Ring and the Book*, and Eliot's *The Waste Land* derives from what we have termed the content and not from the information technology that presents it, this effect has one important parallel to that encountered in some forms of hypertext: in each case the neophyte or inexperienced reader finds unpleasantly confusing materials that more expert ones finds [sic] a source of pleasure. (Landow, "Reconfiguring Writing" 91)

Landow's direct comparison of disorientation arising from "content" to that provoked by "information technology" conflates the experience of an inexperienced computer user with the idea of being an uncertain or unconfident reader. Comparing the "unpleasant" sensation of the "neophyte or inexperienced reader" with the more positive response of "more expert" readers, his approach reveals a series of insights into the impact of varying levels of technological expertise when reading and interpreting text in hypertext format. Among his own students, he observes that those with "more computer skills" tended to assume the predominance of "the system" rather than the author. As a result, he suggests they "tended to ignore... stylistic and other author-created devices" (Landow, "Reconfiguring Writing" 95). Though Landow's emphasis is on expertise as a key factor for enjoying the challenge of reading literary hypertext, he finds that the approach of an uncertain amateur reader – both in terms of technical expertise and in familiarity with the hypertext form – can be productive, opening up new responses and awarenesses in the text.

By introducing the possibility of "pleasurable disorientation," and linking it to the experience of reading famously difficult canonical works of literature, Landow suggests that the kinds of encounters with "system opacity" described in this chapter might be both intellectually and emotionally rewarding. In the texts I have described, troubling phenomena are intertwined with an impression of new insights prompted by engagement with unfamiliar technological forms. Thus the imagery of spirit and premonition in "Dream Chad" transforms a tale of frustrating malfunction into an affirmative portrayal of the computer as point of communication. Similarly, the performed deletion of "Agrippa" uses the shock of unexpected ephemerality to draw attention to the functions of both human and

computer memory. In both cases, the emphasis on “system opacity” is also a way of inviting a deeper and more sustained engagement with the computing technologies described. In *Patchwork Girl*, the divided limbs of its ‘creature’ heroine are aligned with the fragmented narrative process inherent to the hypertext publishing environment. The heroine’s motley body contains and expresses the voices of other characters subsumed within it, reiterating the status of “electronic writing space” as a polyvocal environment capable of representing a range of different voices. In his discussion of hypertext in “You Say You Want a Revolution”, Stuart Moulthrop notes that “[t]he text gestures toward openness” but “then it forecloses: some options are available but not others, and someone clearly has done the defining” (Moulthrop, “You Say You Want A Revolution?” 21). Hypertext offers an experience of controlled disorientation, and I pursue the possibilities offered by this new environment in the next chapter, where I consider how themes of “system opacity”, haunting, possession and disorientation play out with the arrival of the “world wide web”, whose invention expanded the possibilities of computing technology from enclosed (if mysterious) spaces to include the genuine possibility of “a hypertextual labyrinth of nodes and links” (Gaggi 122).

CHAPTER 3: DIGITAL EXOTIC

In the previous chapter, I described a moment in Kamau Brathwaite's short story "Dream Chad" when an unexpected message appears on the computer screen, announcing that the author can no longer access his document because "somebody else" is using it. Brathwaite later wonders if another computer – the one he has left behind in his home in Jamaica – may have been trying to contact him, speaking "through" the screen of the computer in front of him. This imaginative interpretation casts the computer as an "enchanted object" (Murray 99), capable of displaying information transferred instantly across great distances. It might also be considered a response to the increasing capacity for seemingly-instantaneous communication enabled by the use of messaging on the internet and early iterations of the World Wide Web. In the early 1990s, the "invention" of the World Wide Web and arrival of the early web browsers replaced the text-based bulletin boards, forums and listservs of the 1980s internet, introducing the possibility of a visual interface for electronic transfer. As the Web grew in scale and popularity, commentators began to address the contrast between the conceptual scale of this new form of communication – often conceived in spatial terms as a potentially limitless expanse of machines, users, and information sources – and the seeming intimacy of its arrival on a specific individual's own computer screen. In this chapter, I consider how three literary works explore different ways of representing the idea of such expansive, and expanding, networks encountered via the immediate and present object of the computer. Focusing on imagery of spatial distance, unfamiliar landscapes and exoticised geographies, I consider the representation of these aspects in Shelley Jackson's *Patchwork Girl* (1995), Jeanette Winterson's *The Powerbook* (2000) and *Look at Me* by Jennifer Egan (2001).

The most frequently cited literary touchstone for ideas about the Web as it developed at lightning-speed in the early 1990s is William Gibson's vision of

“cyberspace” in his novel *Neuromancer* (1982). In the fictional future society Gibson describes, cyberspace is defined as a “consensual hallucination” of “unthinkable complexity”:

Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts... A graphic representation of data abstracted from banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding... (Gibson 67)

Cyberspace in *Neuromancer* is thrilling, dangerous, and powerfully addictive. It is experienced as a physical sensation, a virtual reality embodied by the trickery of electrodes and circuits. Cyber cowboys “jack in” to cyberspace via incongruously cumbersome machines, and in this new space they are able to defy their bodily limitations. The intensity of cyberspace as an “infinite datascape” (308) thrills those who flow through it. Electrified by the “adrenaline high of youth and proficiency” (12), those who have become accustomed to cyberspace are disdainful of the mundanity of the everyday world, mockingly dubbed “meatspace”. Thus the novel’s hero, Case, abhors the “prison of his own flesh” as he longs for the “bodiless exultation of cyberspace” (12).

As Wendy Chun observes in *Control and Freedom*, the exotic exultation of Gibson’s conception of cyberspace had a long and lasting influence on expectations and descriptions of the Web in the nineties. As the Web grew in scale, however, it never quite fulfilled the “virtual reality” promise of *Neuromancer*’s speculative future-romance. Chun argues that “mainstream uses of the term *cyberspace* diffused the Internet’s ‘openness’ in order to produce a mythical user” (42), later suggesting that the “banality” (254) of online experiences contrasts with the promise of the rhetoric surrounding the Web in the 1990s. Nevertheless, comparisons of the Web with Gibson’s conception of “cyberspace” remained current throughout the decade. Chun finds that the rhetoric of an “electronic frontier” as a “terrestrial yet ephemeral” space played a significant role in describing and developing the Web:

Constructed as an electronic frontier, cyberspace managed global fiber-optic networks by transforming nodes, wires, cables, and computers into an infinite enterprise/discovery zone. Like all explorations, charting cyberspace entailed uncovering what was always already there and declaring it new. It obscured already existing geographies and structures so that space became vacuous yet chartable, unknown yet populated and populatable. Like the New World and the frontier, settlers claimed this “new” space and declared themselves its citizens—conveniently, there were no real natives (just virtual ones, created by cyberpunk). [...] Moreover, cyberspace as a terrestrial yet ephemeral outer space turned attention away from national and local fiber-optic networks already in place toward dreams of global connectivity and postcitizenship. Those interested in “wiring the world” reproduced—and still reproduce—narratives of “darkest Africa” and civilizing missions. (Chun, *Control and Freedom* 51)

Many portrayals of the web continue metaphorical associations and assumptions already developed in relation to the computer as a closed system, but add the frisson of spatial distance and the promise of an electronically mediated “world” expanding beyond the boundaries of the computer as object. In this chapter, I examine how such narratives of exotic landscapes and ephemeral experiences have worked in literary practice, as a means of capturing and mythologising, but also questioning, encounters with the electronically mediated environment promised by the Web.

As with the adoption of notions of “cyberspace” from *Neuromancer*, descriptions of the Web bear significant traces of the rhetoric surrounding hypertext fiction in the late 1980s and early 1990s. Indeed, the Web might be considered a gigantic expansion of hypertext fiction, or perhaps the innovations of disk-based hypertext fiction are a miniature anticipation of the Web’s later sprawl. For example, Warschauer notes the significance of the “associative nature of hypertext” in the environment of a single computer, before writing that “the impact of hypertext becomes more profound when a single computer’s files are linked with other files around the world, as on the World Wide Web” (Warschauer 7). These systems’ mutual reliance on the “hyperlink” means they share a foundational structure: a series of interconnected links by which the reader/user navigates a much larger expanse of information. As I discussed in the

previous chapter, hypertext fictions published in the enclosed realm of the disk or “diskette” quickly accrued a constellation of assumptions and approaches, whose most significant attributes include the “flexibility” and “ephemerality” of information stored in these forms, the disorientation and confusion which might arise when navigating hyperlinks, and a related understanding of the hypertext as a vast expanse of limitless interpretive possibilities. Here I explore how similar interpretations emerge in accounts of the experience of writing and reading information on the Web. The concept of a system of links as a vast “space” of infinite possibilities is further amplified in descriptions of the Web’s scale, with examples ranging from dry observations of scope and function, as in Warschauer’s observation that “the Web places an unprecedented amount of information at the hands of individual users around the globe” (Ibid), to flourishing expressions of the Web as a vast new expanse of endless potentiality.

In Michael Joyce’s discussion of re-reading and hypertext, he describes “hypertext” as “a representation of the text that escapes and surprises by turns” (580), a format whose multiple options for navigation offer seemingly limitless interpretive possibilities. For Joyce, a “complex and richly contingent hypertext [narrative]” is a “thicket” which the reader endeavours to “blaze through,” an experience which he compares to the act of traversing information on the Web:

[F]or any but a reader who has consciously blazed his way through the thicket (breadcrumbs, in fact, have become a technical term for computer tools designed to keep track of the reading of hypertexts) it is unlikely that successive readings by a single reader will be in any significant way alike. Even in less vigorous hypertext systems such as current instantiations of the World Wide Web, bereft of the systematic memory that shapes possible readings... the narrative of possibilities unfolds. (Joyce, “Nonce” 585)

Joyce’s vocabulary in comparing hypertext fiction with the Web evidently privileges the fiction; given the explosion of information and variety online, perhaps “less rigorous” would be a more appropriate choice of adjective than “less vigorous”. However, the important factor here is Joyce’s insistence on the Web as an unshaped version, devoid of “systematic memory.” In other words, the Web – at least in the “instantiation” of the time-period Joyce is referring to – does not

attempt to influence or record users' route through it; nor is it structured with a particular ideal trajectory or series of potential narrative outcomes in mind. Endowed, like hypertext, with an unfolding "narrative of possibilities," the potential routes through the Web are offered in a haphazard and uncontrolled fashion. Writing in 2006, Astrid Ensslin draws a similar conclusion when she observes that "[h]ypertexts most frequently appear on the internet, the anarchic, dynamic nature of which subjects them to ephemerality and evasiveness" (Ensslin, *Canonising Hypertext* 59-60).

As I described in the previous chapter, Shelley Jackson's *Patchwork Girl* associates the experience of writing and reading hypertext with a release from the predetermined strictures of "linear" narrative. Echoing the rhetoric in Coover's article "The End of Books," accounts of writing in *Patchwork Girl* suggest that hypertext offers a new form of narrative freedom by releasing both writer and reader from the constraints of predefined narrative trajectories. The descriptions of electronic space and the "possibilities" for a new kind of narrative portrayed in Jackson's work also anticipate the "anarchic, dynamic" nature of the Web as defined by Ensslin. *Patchwork Girl* celebrates hypertext as a way of evading the prospect of being pinned down to the restrictions of a single defined shape or trajectory, portraying conventional inscription as an attempt to tame or fix the individual:

The curious, the lustful, the suspicious and the merely stupid watch me wherever I go and some follow me, scribbling notes and numerals, as if translation into a chart or overview will make all clear and safe as houses. ("A Story": "I Am")

The narrator is determined to resist such attempts at capture, pledging that "[t]hey may be sure that I will lead them for a chase. I am never settled." In *Patchwork Girl*, use of the hypertext format for self-expression is emphatically portrayed as a way to avoid becoming "settled". This deliberate slipperiness is emphasised by repeated comparison with "untamed" creatures and exotic landscapes, portrayed as having escaped the dominant "structure" of domestication and cultivation. The fluidity of electronic text is her natural habitat, the narrator suggests, since it does not require "settlement," nor will it

translate her multifaceted nature into something “clear” or “safe as houses”. In her effort to describe her avoidance of complete textual capture, the narrator of *Patchwork Girl* construes herself/her narrative as a wild creature. “I hop from stone to stone,” she asserts, “and an electronic river washes out my scent in the intervals” (“Body of Text”：“Hop”).

Patchwork Girl is divided into several distinct sections, among which “A Story” offers a more-or-less linear narrative recounting the life and travels of its narrator. In this section, the first-person narration describes the life of the female “creature” created and subsequently destroyed by Dr Frankenstein in Mary Shelley’s novel. In *Patchwork Girl*’s re-envisioning, she evades destruction – with Mary’s collusion – and travels to America, where she wrestles with the fragmentary nature of her body, whose seams and stitches are a source of shame and concern for her throughout much of this section of the hypertext. Whereas the accounts in “Body of Text” celebrate the associative and expansive nature of hypertext, the monster’s first-person life story dwells on her largely unsuccessful attempts to enforce a particular shape and structure on herself and (by association) her writing. As in “Body of Text”, descriptions of the narrator’s body are consistently applicable to the “body” of the hypertext itself, with the fragmentary nature of her stitched limbs used as a metaphor to describe the interconnected sections and segments of hypertext fiction. The section also repeatedly deploys imagery of exoticised landscapes and bodily fragmentation to describe the creature’s efforts to achieve a coherent physical and narrative status. In the default chronological telling, the story concludes with the narrator’s arrival in the desert wilderness of Death Valley, a move which is portrayed as a final turn away from the constrictions of “structure”. “Instead of fulfilling a determined structure,” she discovers, “I could merely extend, inventing a form as I went along” (“What Shape”). Here, as elsewhere in *Patchwork Girl*, the narrator’s actions echo the formal properties of hypertext, emphasising its expansive nature. This time, she announces, she has been transformed “from a would-be settler to a nomad” (“Afterwards”).⁵⁴

⁵⁴ The monster’s freedom of movement in the desert clearly echoes Deleuze and Guattari’s definition of “smooth space,” a structureless, “non-metric, acentred, directional” environment (Deleuze & Guattari 484). For Deleuze and Guattari, the nomad is an archetypal icon of smooth space, and the transition towards nomadism in *Patchwork Girl* suggests a rejection of the “striation” of city and society in favour of a more unbounded existence.

The narrator's shift in status from "would-be settler" to "nomad" at the chronological conclusion of her first-person account in *Patchwork Girl* emphasises the colonial-inflected understandings of "civilisation" and "wilderness" which are present throughout the fiction. In Greg Garrard's definition, the idea of wilderness is conventionally understood as "signifying nature in a state uncontaminated by civilisation" (Garrard 66). In *Patchwork Girl*, cultivated civilisation is repeatedly associated with oppressive constraint. "I was never comfortable in the drawing rooms or the pruned and cherished gardens of Mary's time and territory," the monster asserts, describing herself as "happier where I have room to take long strides and I am enough alone that I can strip and walk unencumbered" ("I am"). When she comments that Death Valley is "a place as far removed in kind from my 'birthplace' as can be" ("Afterwards"), the narrator emphasises the contrast between the "pruned and cherished gardens" of Europe's domesticated pastoral scenes and the desert's status as a vestige of New World "wilderness". Garrard employs similar terms when he argues that "wilderness" is distinct from "the typical pastoral narrative" associated with the landscapes of the Old World, since the "motif of escape and return" often found in wilderness narratives is entwined with "the settler experience in the New Worlds... with their apparently untamed landscapes" (Garrard 66-7). In *Patchwork Girl*, however, there is no intimation of "return": the narrator is content in the desert, where the unusual power of her hybrid body means she is "camel enough to stay alert on the hottest days," and finds herself attuned to her surroundings, "seduced by the sand, the rocks, the dry truculent plants into believing a stubborn blank thingness is the last meaningful state" ("Afterwards"). Ultimately, the "apparently untamed landscape" (Garrard 67) of the desert provides release from her previous attempts to tame her seamed and fragmentary body to fit within an urban or suburban setting.

Astrid Ensslin picks up on the intimations of the "New World" settler in *Patchwork Girl* when she compares the narrator-figure to "a postmodern frontier woman" who "ventures her way though American suburbia and the metropolis, until she finds in Death Valley her ultimate destination" (Ensslin, *Canonising Hypertext* 80). However, although Ensslin's analysis associates the creature in

Patchwork Girl with an idea of the American frontier, she is careful to recast her as a “‘new’ variation of the pioneer woman” (Ensslin, “Gendered Deserts” 214). In Ensslin’s view, this unsettled creature is a “female cyborg” who “uses the vast dimensions of the desert, which anticipate the infinity of virtual, digital space, to unfold her idiosyncratic ideas, undisturbed by male-dominated civilisation” (Ensslin, “Gendered Deserts” 214). The association of desert with “the infinity of virtual, digital space,” and redefinition of the “cyborg” as a new “pioneer” is an important reference-point for my consideration of the intertwining of exotic landscapes and digital space in *Patchwork Girl* and the other fictions I discuss in this chapter. Ensslin associates the ambiguous liminality of the frontier with freedom of movement and thought, concluding that it is emblematic of a suggestion “that hyperspace is the ideal environment for contemporary women writers” (Ensslin 80). Here the idea of the cyborg body as feminist prototype is folded into the notion of the desert/Web as a liminal frontier space, an environment fostering the expression of unbounded creative freedom.

Ensslin’s reading of the desert as “an ideal place for aesthetic proliferation” (“Gendered Deserts” 209) draws on Brian McHale’s definition of the “frontier” in nineteenth-century America as “an ambiguous and liminal space... a prototypical zone” (McHale, *Postmodernist Fiction* 49). McHale cites Richard Chase’s reading of the frontier zone as “not so much as a place as a state of mind’ (qtd in McHale, *Postmodernist Fiction* 49) and suggests that its influence persists in the fictionalisation of contemporary “invented landscapes” (McHale, *Postmodernist Fiction* 48). Despite being fraught with historical inaccuracy – since the wilderness spaces perceived as empty by New World “settlers” were by no means unpopulated – the idea of pristine wilderness is a significant and recurring trope in *Patchwork Girl*. For the creature, the desert is an “ultimate destination” because it removes her from the strictures of the suburban and metropolitan environments in which she has hitherto existed, whose oppression is due to a perpetual awareness of her own bodily nonconformity exacerbated by the perceived scrutiny of others. “[W]hile patchwork had its period in vogue,” she observes, “patched freaks, conglomerates, never did” (“Manmade”). The freedom of the desert, then, is conveyed in terms of her freedom to “wander unobserved”

("Afterwards"), and this lack of observation transforms her perception of her multitudinous body. Her body contains the "traces" of the individuals of whose disparate parts she is composed, and their voices resurface as reminders of their continued presence. In suburbia, she finds these voices cacophonous and overwhelming, "a crowd, a whole gaggle of persons, competing for the space occupied by my one limited body" ("Lives and Livers"). In the "quiet of the desert at noon," by contrast, these voices are welcome, even invited, described in comforting terms as "my body murmuring to me" ("Miked Tripes").

When the creature in *Patchwork Girl* finds herself flourishing unobserved in the desert, her release from what Ensslin calls "male-dominated civilisation" is comparable with a strain of cyberfeminist theory which celebrates the freedom from bodily restrictions afforded by the online environment. In her tremendously influential "Manifesto for Cyborgs," Donna Haraway famously asserted that "in the late twentieth century... we are all chimeras, theorised and fabricated hybrids of machine and organism; in short, we are cyborgs" (150).⁵⁵ Haraway's "Manifesto" proposes technological advance as an opportunity to embrace a chimerical state and thereby dispel "the dominations of 'race', 'gender', 'sexuality' and 'class'" (157). Her "cyborg myth," as she calls it, "is about transgressed boundaries, potent fusions, and dangerous possibilities" (154) and she hopes for the construction of "a cyborg world... in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints" (154). Haraway's suggestion that "[c]yborgs are ether, quintessence" (Haraway, "Manifesto for Cyborgs" 153) was taken up by radical theorists of "cyberspace" in the 1990s who construed the electronic realm of the Web as a possible source of escape from the physical constraints of the body.

The idea of the Web as a "bodiless" environment is at the centre of John Perry Barlow's polemical "Declaration of the Independence of Cyberspace,"

⁵⁵ The term "Cyberfeminism" has been used in a wide variety of contexts. Kate Mondloch roots it in the 1990s, explaining that "the term cyberfeminism was coined in 1991, and cyberfeminist activity flourished throughout the 1990s, coincident with the early excitement and anxiety associated with the wide-scale introduction of the World Wide Web and networked computing. Since then, the term cyberfeminism has achieved a global reach (albeit with an Anglo bias)" (Mondloch 109). Kira Hall distinguishes between "'liberal cyberfeminism' - technology as a means towards the liberation of women - and 'radical cyberfeminism,' the use of women-only groups on the internet in response to male harassment." (Hall, "Cyberfeminism" 149)

written in response to news of the USA's Telecommunications Reform Act in 1996. In the "Declaration," Barlow announces cyberspace as an unfettered "home of the Mind." Addressed to "Governments of the Industrial World, you weary giants of flesh and steel," the declaration's hyperbolic language mimics official rhetoric of borders and frontier zones, first announcing itself as a world "that all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth" (Barlow, "Declaration" n.pag.), before making the distinction that this space "does not lie within your borders" (Ibid):

You are terrified of your own children, since they are natives in a world where you will always be immigrants. Because you fear them, you entrust your bureaucracies with the parental responsibilities you are too cowardly to confront yourselves. In our world, all the sentiments and expressions of humanity, from the debasing to the angelic, are parts of a seamless whole, the global conversation of bits. (Ibid)

As a founding member of the symbolically titled *Electronic Frontier Foundation*, Barlow's optimistic view of cyberspace as "a world that is both everywhere and nowhere" emphasises the disembodiment of interaction, proclaiming that cyberspace "is not where bodies live" (Ibid). Yet it is striking that the rhetoric of borders and seams in Barlow's exultant expression of a cyber-utopia is precisely the kind of imagery whose validity is questioned in *Patchwork Girl*. Anne Balsamo's skeptical summary of "efforts to colonize the electronic frontier" (14) notes that despite the body's capacity to "disappear representationally" in virtual environments, it "does not disappear materially" (Balsamo, *Technologies of the Gendered Body* 15). On one hand, *Patchwork Girl*, like Barlow's "Declaration," celebrates the freedoms afforded by the disembodied environment of electronic space. However, the utopian assumptions evident in Barlow's easy reference to "a seamless whole" which contains "all the sentiments and expressions of humanity" (Barlow, "Declaration" n.pag.) are challenged by Shelley Jackson's contemplation of the dangers of aspiring to seamlessness.

In contrast with the smooth, unfettered environment of the desert, other parts of the story told in *Patchwork Girl* offer a different kind of wilderness to

denote the perils involved in aspiring to smooth incorporation into a larger whole. In a lexia titled “Diaspora,” the narrator’s efforts to make herself appear “seamless” result in drastic disintegration. Her body begins to split apart into its original fragments, the artificially sewn links between limbs broken and torn as the whole disintegrates into separate elements. It does so with an air of anarchic victory which leaves “only ease, unstopped flight” and “limbs ejected like sprung seed-pods bearing only a raw beginning” (“Diaspora”). As with the reference to a wild creature hopping “from stone to stone” (“Body of Text”>“Hop”), this passage rejects expectations of linearity, wholeness or coherence: the story will neither begin nor end, with its defiance emphasised by the lexia’s conclusion with a negative conjunction, “not”. The reference to a “raw beginning” offered by limbs as “sprung seed-pods” in “Diaspora” echoes the more grotesque conflation of body parts and vegetation in an earlier dream-vision, titled “Body Jungle”. Here the narrator envisions herself in a dangerously disorienting environment whose vegetation is composed entirely of body parts, their appearance compared with exotic fruits. In this landscape of disjointed limbs and organs, where “[o]varies hang like kumquats from delicate vines,” the narrator anticipates her own disintegration/incorporation:

At night I will wrap my arms around the warm, loaf-shaped, sour-smelling liver and sleep standing, or dangle in a hammock of nerve fibres. In the morning the convoluted clouds will think about me. They will block my view of the domed sky, which I know will bear faint suture marks, the knit junctures between once-soft sectors of skull. [...] Before long the blood in my veins will be the blood of the body jungle. My skin will fall away in scrolls, my palms and fingerprints will drift down like aged leaves. My veins will unweave and reweave themselves into the network. [...] I do not know how my skull will open, or if I will still know myself when my brain drifts up to join the huge, intelligent sky. (“Body Jungle”)

Unlike the smooth surfaces of the desert wilderness described earlier, the account of the jungle into which the narrator’s parts will be subsumed – substituted for scraps of text as her skin “falls away in scrolls” – suggests an environment which is unruly, chaotic and unbounded. Although there is an intimation of sentience in the “convoluted clouds” which “think,” a sky which is “intelligent”, neither of

these are cast as controlling or containing forces. On the ground, the vegetative parts are left to grow with haphazard abandon.

Katherine Hayles reads the bodily disintegration in “Body Jungle” as an instance of incorporation, where the narrator is absorbed into a larger technological whole. In this “vision,” she suggests, the narrator “becomes a body part of some larger entity, perhaps the computer that thinks/dreams her, just as her parts were once autonomous entities who have now been incorporated into the larger whole/hole that she is” (Hayles, “Flickering Signifiers” n.pag.). In *Patchwork Girl*, however, it is important to note that this “larger entity” is both chaotic and unstructured, and cannot be considered a “whole” in the sense of a complete and bordered thing. In the introduction to *The Wilderness Debate*, Nelson et al state that “[t]he jungle idea connotes disorder and danger, a place in need of discipline” (Nelson et al, *Wilderness Debate* 4). Kelly Enright similarly argues that “[j]ungles’ became synonymous with unordered, chaotic, dangerous and often violent places” in American culture of the early to mid-twentieth century (Enright, *Maximum of Wilderness*), adding that “the distance of tropical forests from most Americans’ experiences made it an ideal landscape for abstraction” (Ibid). Continuing those intimations of unbordered chaos, “Body Jungle” announces a wild space teeming with jumbled connections, “loops,” “coils,” “fibres” which emphatically refuse any predefined structure, just as the limbs’ escape into “seed pods” promise a “raw beginning” in “Diaspora”. The significance of the jungle’s uncultivated state in *Patchwork Girl* is made clearer when the narrator later expresses her yearning to be “toiled over.” Faced by the disorder of her disintegrating limbs, she briefly longs to be “as innocent of device as a flowerbed”, trimmed and curated “by doctors in their gardening gloves, plucking out unruly sprouts and coddling the well organs like the firm bulbs of tulips” (“Appearances”).

The contrast between disordered “wilderness” and tamed “garden” in “Body Jungle” and “Appearances” chimes with descriptions of digital narrative which have deployed similar metaphors of jungle and wilderness to describe issues of confusion and disorientation in navigating hypertext. In “Beyond Myth and Metaphor,” Marie Laure Ryan concludes that the ideal digital narrative should

avoid forcing its reader to enter “a jungle where narrative meaning chokes in the brambles of uncontrollable multiplicity” (Ryan 608). Ryan’s metaphor is borrowed from a short guide published in 1998 on Mark Bernstein’s Eastgate website, where imagery of a cultivated “garden” or “park” is used to represent differences between a disorganised hypertext and a properly navigable narrative. “Hypertext disorientation most often arises from muddled writing,” Bernstein asserts, advising that successful hypertexts can avoid this by containing the formal equivalent of “both parks and gardens”:

Gardens are farmland that delights the senses; parks are wilderness, tamed for our enjoyment. Large hypertexts and Web sites must often contain both parks and gardens. [...] The boundaries of parks should be especially clear, lest readers see them as mere wilderness. Gateways introduce structure and guideposts confirm it, assuring visitors that they are amid a crafted experience, not chaotic wilderness. (Bernstein “Hypertext Gardens” n.pag.)

Bernstein’s and Ryan’s references to “tamed” wilderness are echoed in *Patchwork Girl*, where imagery of exotic wilderness is repeatedly associated with the “chaotic” nature of an unregulated, anti-linear narrative. Contemplating the risks facing “digital narrative,” Ryan notes that “to keep narrative desire alive, it cannot be a wilderness, where links are so numerous that the reader is lost in a thicket that looks the same from every position” (Ryan 607).

As a metaphor for the hypertext fiction itself, the moments of bodily disintegration in *Patchwork Girl* convey an idea of the “web” of hypertext as an indecipherable environment, where a facade of coherence and navigability might threaten to dissolve at any moment. As with Bernstein’s reference to parks as “wilderness, tamed for our enjoyment,” the creature in *Patchwork Girl* eventually represents herself and her text becoming “something between” predetermined structure and chaos. After the explosion of limbs in “Diaspora,” the narrative sidesteps to an alternative scenario, partially undoing the anarchic disintegration with the line “or if that did not happen...” (“Or”). In this alternative account, the narrator’s fragmentary body parts are recombined by the cohering attention of another individual, Elsie:

I was gathered together loosely in her attention in a way that was interesting to me, for I was all in pieces, yet not apart. I felt permitted. I began to invent something new: a way to hang together without pretending I was whole. Something between higgledy-piggledy and the eternal sphere. (“I made myself over/Elsie triumphant”)

Elsie’s status here is that of an ideal reader, whose sustained attention can bring her own version of coherence to the separate “pieces” of the hypertext fiction. She is able to gather the “pieces” of the creature just as the reader of *Patchwork Girl* is invited to become “a sort of Dr. Frankenstein putting together the different pieces of the textual corpus” (Sánchez-Palencia Carazo & Jiménez 116). In the transition from victorious disarray to the compromise of being “loosely” gathered, the narrator comes to believe that if she wishes to maintain her status as a functioning individual/story, it is necessary to correlate – but not control – the disparate fragments which make up her frame. Throughout this section, tendencies toward incoherence and confusion are described using imagery of an encroaching wilderness which is held barely at bay; as Elsie holds the narrator’s multitude of pieces together, her strength is praised as “magnificent, like a woman in a fairy tale, holding her true love tight, though she turn badger or wildcat or asp” (“I Made Myself Over/Elsie Triumphant”).

As a metaphor for an encounter with hypertext, Elsie’s fiercely determined “gathering” of disparate parts is comparable with Michael Joyce’s notion of the successful reader of hypertext who “has consciously blazed his way through the thicket” (Joyce, “Nonce” 585). Both images portray a figure responding to the difficulty of a disparate and intensive environment with stolid determination, which in Elsie’s case is manifested as a “magnificent” capacity to insist on coherence. In *Nostalgic Angels*, however, Joseph Johnson-Eilola offers the prospect of the Web as an environment whose unbounded expanse of information threatens to overflow the possibility of such “gathering” attention. Critiquing the relevance of another pervasive image for the Web, the library, Johnson-Eilola offers the metaphor of “wilderness” as a more apt metaphor to describe a “flood” of information in “current online environments”:

The information load may even now be so high that the only metaphor with which to begin is not the vast, virtual library, but an untamed wilderness—the classification of the library overwhelmed by not only the mass of information but also the need to facilitate cross-disciplinary work and texts. The popular phrases for research and information reveal this tendency: Information is a *flood*, something that must be *sifted, pinpointed, mapped, navigated, and managed*. (Johnson-Eilola 117, emphasis in original)

Johnson-Eilola emphasises expertise as the key to navigating this spatialised “landscape of information”. Though he suggests that “a user can go wherever they wish as long as they have learned how to navigate” (Johnson-Eilola 117), he also remarks that successful navigation “may already be beyond the conceptual scope of... novices” (Ibid). In Jeanette Winterson’s 2000 novel *The PowerBook*, the language of mapping, navigation and co-ordinates dominates her conception of the Web. Just as imagery of chaotic “wilderness” was used by Bernstein and Ryan to convey the impossibility of navigating an overly “muddled” hypertext, *The PowerBook* explores problematics of expertise and navigation by picturing the Web as a vast, unmastered and to some extent unnavigable expanse.

Wendy Chun argues in *Control and Freedom* that “cyberspace loosens place, for place is no longer stable or proper” (46). In the shifting environment of the Web, she suggests, “[p]laces disappear and/or move rapidly; creators/managers of Web pages often move or erase Web pages with little regard for those who have bookmarked or linked to them, or for search engines that have indexed them” (Ibid.). Chun suggests that “[t]he metaphoric use of place blinds us to the Web’s fluidity” (Ibid.). In an early scene from *The Powerbook*, however, Winterson inverts the geographical metaphor to emphasise fluidity, picturing the “wilderness” of the Web as oceanic in scale, a vast and unmappable space amongst whose newly forming “landmasses” the protagonist is unable to pinpoint the one piece of information she longs to find:

This is a virtual world. This is a world inventing itself. Daily, new landmasses form and then submerge. New continents of thought break off from the mainland. Some benefit from a trade wind, some sink without trace. Others are like Atlantis – fabulous, talked about, but never found. Found objects wash up on the shores of my

computer. Tin cans and old tyres mix with the pirate's stuff. The buried treasure is really there, but caulked and outlandish. Hard to spot because unfamiliar, and few of us can see what has never been named. I'm looking for something, it's true. I'm looking for the meaning inside the data. That's why I trawl my screen like a beachcomber – looking for you, looking for me, trying to see through the disguise. (63)

Like other descriptions of the internet in Winterson's novel, this account teems with imagery drawn from myth and fairytale: Atlantis, "pirate's stuff," buried treasure and "outlandish" objects. The unfamiliarity of these elements renders them simultaneously exotic and distracting; as in *Neuromancer*, the web of *The Powerbook* represents a gigantic slew of data in which individualised "meaning" can become submerged or imperceptible. The description of the Web as ocean recurs in *The Powerbook*; at night, when "the search engines are quiet," the narrator keeps "throwing the stories overboard, like a message in a bottle, hoping you'll read them, hoping you'll respond" (83).

In Winterson's account, the concept of the Web as an exotic, shifting space is closely intertwined with her association of "wilderness" with a sublime experience of all-encompassing desire. The contrast between domesticated "settling" and expanses of "untamed" wilderness explored in *Patchwork Girl* are here transformed into an expression of longing for transcendent sexual encounter. Comparing "[m]erely human love" to "an encampment on the edge of the wilderness," the narrator of *The Powerbook* asserts that "[t]he wilderness is not tamed. It waits – beautiful and terrible – beyond the reach of the campfire" (79). When the narrator finally achieves a sexual encounter with the love-object she has pursued across the "new landmasses" of the Web, her description echoes the refusal of "frontiers or controls" found, for example, in John Perry Barlow's utopian "Declaration of Cyberspace":

In this space which is inside you and inside me I ask for no rights or territories. There are no frontiers or controls. The usual channels do not exist. This is the orderly anarchic space that no one can dictate, though everyone tries. This is a country without a ruler. I am free to come and go as I please. This is Utopia.... This is the model of government for the world. No one will vote for it, but everyone

comes back here. This is the one place where everybody comes.
(Winterson 175)

Thus the rhetoric of the “bodiless” Web is redeployed to express an entirely embodied experience, in a description which privileges the physical intimacy of this “offline” encounter over the ardent pursuit of “meaning” online. By turning the rhetoric of the Web back on to physical encounter, and using it as an expression of freedom, Winterson inverts the process of metaphorical association found in *Patchwork Girl*. Whereas *Patchwork Girl* offers the monster’s body as metaphor for the formal properties of electronic space, Winterson performs the opposite trick, deploying by-now familiar imagery associated with Web and digital environments – ephemerality, evasiveness, unnavigability – to contemplate the different ways of presenting a narrative of contemporary love and desire.

Winterson’s reversal of expectations around technology, exemplified by her account of sex as an “orderly anarchic space” has led some to criticise *The Powerbook* for not engaging directly with the technologies it purports to consider. The book is laced with visual and verbal allusions to technology – a computer on the cover of the first edition, icons throughout, and chapter headings which reuse the language of word processing – yet contains relatively few direct descriptions of its use. As with the description of email as “a message in a bottle” in the earlier quotation, descriptions of browsing and emailing are repeatedly cloaked in metaphor and allusion. Observing that Winterson has previously appeared ‘terribly uneasy about science and technology’ (Turner n.pag.), Jenny Turner chastises the novel’s failure to offer original insights into the technologies it adopts as a structural framework. Elaine Showalter agrees that *The Powerbook’s* visual and verbal references to computing is a misleading façade which, in her view, does not carry through to its content:

Designed to suggest the appearance and the technique of virtual reality, with a cover like a computer handbook and chapter divisions of hard drives, icons and documents, *The PowerBook* is not a playful postmodern experiment or an investigation of the multiple personalities of email. Instead, Winterson uses the metaphor of email to discuss sexual freedom and power. (Showalter n.pag.)

Showalter's comment is slightly misdirected, since the concept of "virtual reality" cannot be accurately termed a "technique", nor is email inherently endowed with "multiple personalities". Nevertheless, her recognition of the use of technology as "metaphor" is instructive, as is Turner's note on the unoriginality of Winterson's speculations on the internet; she wryly notes that the author "would not be the first person to discover that interfacing with the Internet is good for blurring life's rough edges" (Turner n.pag.).

Winterson certainly does treat computing technology as a convenient "metaphor" or "conceit" through which to indicate and explore themes already familiar to her readers: sex, power, and the act of authoring. Using the idea of "the computer" as a visual and structural framework, *The Powerbook* engages with the emotional and affective impact of new technologies by exploring the ramifications of the electronic medium as a new form of narrative space, rather than the technical processes involved in engaging that space. Its approach is also somewhat dated, given that many of the tropes of exotic digital subjectivity found in Winterson's novel belong to the vision of "cyberspace" offered by cyberpunk novels, rather than the more practical, more prosaic setting of the Web. For example, the novel's dialogue between intimacy and distance draws explicitly on the notion of "cyberspace" versus "meatspace" which originated with William Gibson's 1982 novel *Neuromancer*, and is deliberately emphasised in the narrator's declaration that "[m]eatspace still has some advantages for a carbon-based girl" (174). In *The PowerBook*, cyberspace is repeatedly aligned with a romanticised fantasy space, and the novel deploys several tropes associated with theoretical and fictional accounts of cyberspace as an anonymous realm for personal reinvention. These are parroted by the author-figure as a way of announcing her own freedom from prosaic forms of 'real-world' embodiment. Thus her electronic interactions — personal experiments with 'long lines of laptop DNA' — are characterised as weightless and perpetually transformable.

However, the belated impracticalities of the novel's approach to computing technology – manifested in the absence of radical statements on the technologies described, and overreliance on cyberpunk tropes which were already nearly two decades old when *The Powerbook* was published – do not diminish the validity of

The Powerbook's conceptual project. In many ways, the novel offers an exceptionally conservative view of computing technology, with its rhetoric of shifting worlds and anonymous encounters. *The Powerbook* appears to celebrate ideas of “virtual” existence at a time when the lure of the Web as a space for anonymous interaction had already begun to seem dated. In practice, however, it also works to reveal a series of anxieties and disjunctions between the ideal of a flexible, ephemeral space and the practical difficulties of matching the needs and desires of a material bodily existence to the worlds played out on the computer screen. In addition, the representation in *The PowerBook* aligns these notions of the endlessly flexible and reinventable 'cyberspace' with an idea of the storyteller as weightless fantasist, simultaneously controlling and controlled by the tales she spins.

Kate Kellaway considers the novel's swerve away from detailed engagement with computing technology to be a positive attribute, suggesting that by treating the computer as “a conceit,” Winterson is able to transcend the kind of prosaic statements which might hamper the flow of narrative. By shunning the constriction of detail, the author is released to “explore” her chosen themes, treating the computer as “a conceit, an invitation to explore, a way of making narratives come and go faster than the speed of light” (Kellaway n.pag.). Implying that overly detailed reference to technological forms might weigh the text down with onerous “jargon,” Kellaway praises the prose as “graceful, jargon-free, light as thistledown” (Kellaway n.pag.). By celebrating Winterson's work for its speed and lightness, Kellaway divorces her writing from the implied stolidity of the realm of computing technology, aligning the author's “graceful” prose with the ephemeral natural imagery of “thistledown.” She subsequently shifts her metaphorical associations from nature to magic, redefining the author as a “witch”:

[T]his novel is in no way ‘state of the art;’ its heels are in the past, its heart outside time. It is more like a book of spells than a computer manual, written by someone determined to be a witch through words, convinced that lives are transmutable, open to the power of wishes. She believes that we can be authors of our own lives. (Kellaway n.pag.)

The simile of the novel as “a book of spells,” whose exotic associations with myth and fairytale oppose the prosaic imagery of “a computer manual,” recalls Brathwaite’s alignment of computing technology with magic and spiritualism, where the figure of the witch Sycorax from Shakespeare’s *Tempest* simultaneously indicates and anthropomorphises the mysterious workings of his own computer. Here, Kellaway cites the idea of witchcraft with similar intentions: magic functions as a byline for mysterious and as-yet-undefined concepts and situations, lives which are ‘transmutable’ and pliable to the fairy-tale implications of “wishes.”

Kellaway’s imagery in her account of *The PowerBook* deliberately separates the qualities of lightness, mutability and magic which she finds in Winterson’s novel from the idea of computing technologies, which she repeatedly figures as solid and unyielding. In *The PowerBook*, however, this distinction is by no means clear. Winterson’s portrayal of a constant process of fictional reinvention is explicitly aligned with exploration of the Web as a mutable space, constituted in and through technological tools but whose functions are depicted as both exotic and magical. *The PowerBook* challenges this state by alternating between tales spun (in electronic form) by its fictional author-figure and their equivalent within a “real-world” context. In the opening chapter, titled “language costumier,” the author-figure introduces her electronic domain by offering an extended metaphor in which she is cast as a mysterious shopkeeper “years ago” and her new interlocutor is a nervous customer:

It’s night. I’m sitting at my screen. There’s an e-mail for me. I unwrap it. It says – Freedom, just for one night.

Years ago you would have come to my shop at the end of the afternoon, telling your mother you had an errand for the poor.
(Winterson 3)

The act of “unwrapping” an email maps the intangible onscreen processes of the computer’s electronic domain onto a tangible action full of a sense of promise and mystery. This unwrapping is followed by a more sustained metaphorical comparison which aligns the narrator’s promise of an altered online narrative

with an equivalent environment set “years ago.” Populated by objects of disguise – suits of armour, wimples, wigs “like severed heads” – this equivalent space is no ordinary shop. Labelled merely 'VERDE', it is understood in abstract terms by an imagined community of onlookers, where “everyone knows that something strange goes on inside” (3). The pseudo-historical setting – “[t]hey say that Jack the Ripper used to come here” – is coupled with imagery from myth and fairytale, as the narrator/shopkeeper's shadowy works of transformation are accompanied by “the looming of a bear's head, a knife” (4). Childish and uncertain, with a mother to deceive and a longing for magical transformation, the customer is depicted as an innocent, solitary heroine reminiscent of the youthful stars of the Brothers Grimm. Her apparent uncertainty contrasts with the knowing power of the witchy shopkeeper, who figuratively encloses the tableau of this mysterious interior when she moves to “pull the blinds and light the lamp”, before announcing that “this is where the story starts.”

As the “story” begins, however, the richly described environment shifts again, and the reader is jolted from the simulacrum of the shop to a space described in terms which are simultaneously electronic and bodily. Thus the story is relocated “[h]ere, in these long lines of laptop DNA,” its imagery deliberately mingling the computed and the bodily through the figurative conversion of human biological elements to electronic space. An impression of presence is further emphasised by repetition of adverbs which offer an illusion of location and definition: “Here we take your chromosomes, twenty-three pairs, and alter your height, eyes, teeth, sex. This is an invented world” (4). In the transition from fantasy shop-space to an odd amalgamation of electronic and bodily processes – both equally indecipherable to a non-specialist – the agent of transformation also becomes difficult to locate. The narrator's evasive denial of sole responsibility is indicated by a shift from personal pronoun to collective pronoun. It is not “I” who will “take” and “alter” the chromosomes of this eager subject, but a shadowy “we” whose agency may or may not include the subject herself. Whereas the imagery of the antiquated shop from “years ago” offered imagery of concrete, individualised personal interaction — author to subject, shopkeeper to customer — this description suggests collective anonymity. It is not, however, an experience

shared in equal terms. Though the narrator suggests, ominously, that “tonight we can go deeper than disguise” (4), it is only the subject who is required to “take off your clothes,” “take off your body,” and it is emphatically only “you” who “can be free for just one night” (4).

The slippage of agency and effect in the novel’s opening sections introduces an uneasily hierarchical dynamic between author and subject. An illusion of shared experience is located in electronic space, yet repeatedly reverts to separated identities for whom confluences of agency and intention turn out to be fleeting and illusory. In particular, the novel returns to a series of contexts in which intimacy and agency become problematically entangled. Hence “the strange story of you and me” (4), introduced in a shop where “something strange” (3) is perceived to take place, evolves through a dialogue between ostensible strangers. *The Powerbook* alternates between depicting intimately shared bodily space and exploring the ramifications of physical and emotional distance. In the first section of screen-based dialogue between Ali and her subject, an interaction which began with the transaction of shopkeeper and customer quickly strays into a scenario in which the physically distant protagonists are described as “intimate of thought,” their anticipatory stances matching one other even in absence:

The screen was dimming. The air was heavy. You and I, separated by distance, intimate of thought, waited. What were we waiting for – fingers resting lightly on the board like a couple of table-turners? (Winterson 26)

The “dimming” screen and “heavy” air in this description anticipate the cloying romantic tone adopted in Ali’s next story. Just as the author-figure in her shopkeeper guise suggestively pulled down the blinds in the opening chapter, the screen’s lowering light appears to responsively transform itself, reducing its intrusive brightness in preparation for an intimate encounter. Indeed, the computer screen is imbued with the suggestion of emotional responsiveness throughout the novel, not only as the window to a “virtual world” for Ali, but also as metonym for the narrator’s emotional state. At the end of the book, after having been abandoned by her lover, Ali will return to her computer to find again that “the screen had dimmed” (240). Restless and insomniac, she compares her

own state with that of the formerly responsive interface: “the screen is sleeping but I can’t” (240).

The Powerbook portrays the computer screen in a dual role, acting as both mirror of the narrator's feelings and sensations and as window to the reactions (or non-reactions) of the other individual. This depiction of the screen recalls Janet Horowitz Murray’s conception of the computer as an “enchanted object”:

The computer itself, even without any fantasy content, is an enchanted object. Sometimes it can act like an autonomous, animate being, sensing its environment and carrying out internally generated processes, yet it can also seem like an extension of our own consciousness, capturing our words through the keyboard and displaying them on the screen as fast as we can think them. (Murray 99)

For Murray, “[t]he enchantment of the computer creates for us a public space that also feels very private and intimate... computers are liminal objects, located on the threshold between external reality and our own minds” (Murray 99). She adds that “[n]arrative is also a threshold experience” (99), and the intertwining of both kinds of threshold is an essential aspect of the portrayal of writing (on computer) in *The Powerbook*. Ali's imagery of the screen as partition is not only an attempt to encapsulate a sense of thwarted communication. It also fits within a broader argument developed over the course of the novel, which seeks to align the experience of writing fiction with acts of online communication and self-invention.

In a later passage Ali, as author, depicts herself “typing on my laptop, trying to move this story on, trying to avoid endings, trying to collide the real and the imaginary worlds” (93). Her attempt to prompt collision between what she defines as “real” and “imaginary” worlds prompts her to muse on a putative flimsiness to the “partition between real and invented”:

The more I write, the more I discover that the partition between real and invented is as thin as a wall in a cheap hotel [End 93] room. I can hear voices on the other side, running water, the clink of bottles [...] When I sit at my computer, I accept that the virtual worlds I find there parallel my own. I talk to people whose identity I cannot prove.

I disappear into a web of co-ordinates that we say will change the world. What world? Which world? (93-94)

Ali's observations of the ramifications and associations of "virtual worlds" are again accompanied by "co-ordinates," this time an all-encompassing "web" whose much-anticipated influences, she suggests, are already in place. When Ali questions "which world" will be changed by the experience of "virtual worlds," she suggests that the collision between 'real and imagined' envisaged a few lines earlier has already taken place: the world has proliferated such that it is impossible to establish a fixed location or sphere of influence.

A line that is often overlooked in Donna Haraway's famous assertion of "cyborg" embodiment is her acknowledgement that we are not, in fact, all cyborgs now – at least, not in the sense of becoming "ether, quintessence" (Haraway, "Manifesto for Cyborgs" 153). "Our best machines are made of sunshine," Haraway asserts, "all light and clean". People, on the other hand, "are nowhere near so fluid, being both material and opaque" (153). Despite its pretensions to the bodiless anonymity of "virtual" space, *The Powerbook* is ultimately an exploration of the problematics, and pleasures, of being "both material and opaque." The narrator exults in the perceived ease and fluidity of her adopted electronic environment, but reminders of material "reality" continually creep in. "[I]n imagination anything can be perfect," she observes, but "[d]ownloaded into real life, it was messy" (46). In a story she tells, the vagaries of the body invade as the narrator finds herself "in the queue, the sun too hot, no sunscreen, sweating like a horse, my mouth dry, my face like a gargoyle (no sunglasses), my blood pressure at hospital level and my heart melting like a tourist's ice cream" (115). In the end, ruefully, she acknowledges that the ease of movement across the exotic spaces of the Web are not replicated in the reality of material travel, which doubles as an extended metaphor for choices in life:

There's no Netscape Navigator to help me find my way around life. I have to do it myself and my helpers are unexpected and odd. Of course, I can take a planned route, like those things you buy on the highway to tell you which way to go. There are plenty of organised tours and arranged excursions. I need miss no Ancient Monument or World Heritage Site. I can even go off-track, provided I follow the

way-markers. If I want to go on safari, I can do it from the safety of a jeep, but I must not, must not, get out and stare at the lions. (227)

The image of the wild animal in the reminder not to “get out and stare at the lions” – since “lions live in the Wilderness” (227) – ultimately presents a stark division between the “wilderness” the narrator has craved and the practical existence she would be sensible to live. With its wry reference to a “planned route,” “organised tours and arranged excursions,” this offers a domesticated vision of “settling” similar to the existence eventually abhorred by the monster in *Patchwork Girl*. Like the monster, the narrator pledges herself to the unplanned risk of wilderness, a route taken “by way of the lions” (Ibid), though it is less clear whether she will follow through on her intentions.

Jennifer Egan’s 2001 novel *Look at Me* takes a more satirical approach to the conflict involved in being transformed into an electronic “presence” while continuing to exist as a “material and opaque” body. Whereas Winterson’s examination of online presence loops through hyperbolic metaphor and symbolic events, *Look at Me* examines the differential between “messy” reality and an exoticised online presence by attending closely to the emotions and processes involved in self-fictionalisation. As in *Patchwork Girl* and *The Powerbook*, *Look at Me* deploys imagery of exotic and unfamiliar scenes and concepts to convey a sense of the unfamiliar thrill of engaging with inscrutable technological phenomena. My analysis focuses on the narrative viewpoint of one of the novel’s several protagonists, Charlotte Swenson, a former model whose already-waning career collapses after her face is damaged in a serious car accident. *Look At Me* explores a disjunction between the idealised fluidity of an online existence and the lived experience of embodied materiality.⁵⁶ This is expressed in Charlotte’s newfound sense of physical vulnerability, as she gradually learns to acknowledge

⁵⁶ Describing the late 1980s and early 1990s, Anne Balsamo finds that “The preferred body was one under control, pliable, amenable to the subject’s will: the fit and healthy body, the [End 1] tight body, the street-smart body, the body transcending itself into the infinity of cyberspace. A body more amenable, malleable, and more subordinate to mind or will than ever before. Just pick the body you want and it can be yours (for a price).” (Balsamo, *Technologies of the Gendered Body* 1-2). Charlotte’s gradual resistance to outside influences over her body eventually concludes with her absolute refusal to be “amenable, malleable”, either in life or in the commercialised version of “cyberspace” that is PersonalSpace. As a result of her resistance, she is ultimately replaced onscreen by a literally “malleable” body – an animated avatar.

her own presence as a bodily mass, rather than focusing on her imagined future image. As a model, Charlotte has longed for transcendent fame, a goal she figures repeatedly as a “mirrored room,” whose shimmering promise she can glimpse in her imagination but never reach. As the impact of Charlotte’s accident brings an increasing awareness of the fragility of her body, however, she begins to value it over the ephemeral, transcendent existence she has longed for. Her reluctance to allow further harm to her already-damaged body is sympathetically portrayed in a scene where her modelling contract is dependent on her permitting her face to be cut. When she refuses, she emphatically values the preservation of her current physical state, in all its material opacity, above her fantasies of a transcendent existence.

However, just as she has begun to prize her newly accepted bodily materiality, Charlotte is drawn into a world which demands a new version of performed fluidity. Charlotte is lured to sell her story as an ‘Extraordinary’ individual profiled online in the internet enterprise, PersonalSpace, in a lucrative deal which permits every aspect of her life to become the property of the website. The web-based narrative of becoming an “Extraordinary” on ‘PersonalSpace’ involve a constant performance, as she reinvents herself for the imagined gaze of an assumed audience, demonstrating a willingness to lie, alter and adapt herself while retaining a veneer of apparent authenticity. This effectively replaces her vision of the infinite space of the ‘mirrored room’ with an infinitely adjusting space for self-invention. Recalling the monster in *Patchwork Girl’s* description of herself as an exotic object under others’ scrutiny – “the curious” who “watch me wherever I go” – Charlotte’s appeal for PersonalSpace is partly rooted in the exotic allure of her former profession. Throughout *Look at Me*, models are portrayed as extraordinary, exotic beings. Viewed from a distance, they are tinged with aspects of wilderness or the supernatural, whether as ‘creatures who seemed the improbable hybrids of several exotic, even fantastical species’ (195), or semi-mythical figures, ‘glowing like marine life from the phosphorescent reaches of the sea, girls like unicorns’ (442). However, although the rhetoric of the ‘fantastical species’ of models in *Look At Me* suggests a flock of identically gorgeous entities, untroubled by individual personality traits, Charlotte’s appeal for the

PersonalSpace project lies in her status as a damaged version of such undifferentiated beauty. Having spent her life cultivating the belief that “we are interchangeable – the first lesson one learns as a professional beauty” (183), Charlotte’s process of self-description for the PersonalSpace project forces her to gradually shake off this sense of her own interchangeability, acknowledging unique faults and unearthing painful memories.

Egan’s portrayal of the ‘premium’ strand of the ‘Ordinary People’ project in *Look At Me* critiques the kind of digital exoticism celebrated in *The Powerbook*. Charlotte’s role (both as model and subject) is portrayed as that of an objectified exhibit, a factor emphasised by the language used to describe her. In his 2001 work *The Postcolonial Exotic: Marketing the Margins*, Graham Huggan argues that literature is ‘entangled, like it or not, in the language of commerce’ (264) and defines the ‘postcolonial exotic’ as a system of claims to authentic representation which have been commodified for readerly consumption. His account details how the “Commonwealth writer... celebrated as an exotic” is “required to play the dual role of cultural ambassador and native informant” (234). Huggan aligns this open consumption with literary tourism, noting that “there is a sense... in which touristic discourse works to promote difference while simultaneously erasing it” (203). A digital version of such exoticised performance takes place in *Look at Me*, where comparable imagery of marginal spaces, and marginalised individuals, is aligned with the representation of exploratory uses of technology. Charlotte is portrayed as an ‘informant’ reporting from technologically inflected situations in ways which deliberately construct her as an unfamiliar and exotic entity.

In *Look at Me*, Thomas, the director of PersonalSpace, explains that his new enterprise is designed to fulfil precisely the kind of ‘touristic’ impulse Huggan identifies in consumers of the ‘postcolonial’. Stating that ‘the golden age of tourism is basically over’, Thomas explains that PersonalSpace aims to provide a clean, convenient and sanitised substitute. His dismissal of physical travel is dominated by imagery of danger and destruction. For Thomas, the stories sold within his enterprise provide a substitute for a now-defunct age of touristic travel, since he is convinced that “the golden age of tourism is basically over, especially for Americans” (324). His dismissal of tourism is dominated by imagery of

danger and destruction, against which he juxtaposes the domestic safety of encountering simulated environments online:

The coral's dead or dying, you've got weird grass choking out the Med, you've got e-coli and flesh-eating diseases all over the place, you've got terrorists mowing people down in the Temple of Luxor ... I mean, at a certain point, how much are you willing to risk for a two-week vacation? So we're thinking ahead. (324)

Charlotte's role as an 'Extraordinary' on PersonalSpace casts her as an object for precisely this kind of touristic attention. When Thomas suggests filming her apartment, he employs a phrase aligned with wildlife, safari and zookeeping, announcing that he wishes to "get some raw footage" of her in her "natural environment" (325). The sardonic phrasing clearly aligns the "extraordinary" subject with the context of commercial safari and wildlife documentaries.

In her guided tour of the Extra/Ordinary.com headquarters, Charlotte is shown an example of the video content destined for the Extraordinary People project. On a computer whose "broad, iridescent screen appeared to hover on midair," Thomas displays a prototype video of a family in Kenya, with "the richly saturated images of a very black man standing by a yellow cow" (321). The vivid hyperreality of the film astonishes Charlotte:

The quality of the image was extraordinary; each yellow hair on the cow's hide stood out in a kind of relief that suggested three dimensions. The man himself was beautiful, sharp slivers of muscle in his chest and torso flicking in the sunlight... On his neck and arms were strands of multicoloured beads. Irene and I both gaped at the image, whose urgent realism had the unlikely result of making it seem, finally, unreal – like a hologram. (322)

Thomas explains, offhandedly, that the company may not end up "using" this man, suggesting that "we may want to go more exotic" (322). When the man onscreen begins to sing, Charlotte finds that the "heightened precision" of the sounds make her feel "not merely in the warrior's presence, but inside his throat" (323). The "urgent realism," "heightened precision" and impression of physical "presence" in the description of this onscreen moment marks a new phase in the

rise of the Web: no longer an amorphous mass of potential anonymity, but rather a system in which exoticised landscapes and individuals can be transformed into commercial property, and the promise of other peoples' "presence" is offered as a way of escaping the banal borders of everyday life.

In her 2002 book *Cybertypes*, Lisa Nakamura explores the use of exoticised, distancing and unfamiliar imagery in late 1990s advertisements for computing technologies and the internet. Nakamura's interest lies with examining how a particular set of exoticising cultural insignia are deployed as a means of enticing a non-expert Western audience to purchase commercial products – precisely the scenario displayed by Thomas. She begins by asserting that "the internet is a place where race happens", aiming to debunk Barlow's mythic vision of an internet which might function "without privilege or prejudice accorded by race, economic power, military force, or station of birth" (Barlow, "Declaration" n.pag.). In this environment, she argues, "[t]he world without limits is represented by vivid and often sublime images of displayed ethnic and racial difference," where the "landscape" of advertisements for computing technology are decorated by "[i]mages of this other as primitive, anachronistic, and picturesque" (89). Nakamura's comments directly address the touristic sensibility satirised in the descriptions of "Extraordinary People" in *Look at Me*:

Travel and tourism, like networking technology, are commodities which define the privileged industrialized "first world" subject... Microsoft's omnipresent slogan, "Where do you want to go today?" rhetorically places this consumer in the position of the user with unlimited choice; access to Microsoft's technology and networks promises the consumer a "world without limits" where he can possess an idealized mobility. Microsoft's promise to transport the user to new (cyber)spaces where desire can be fulfilled is enticing in its very vagueness, offering a seemingly open-ended invitation to travel and new experiences. A sort of technologically enabled transnationality is evoked here, but it is one that directly addresses the "first world" user, whose position on the network will allow him to metaphorically go wherever he likes. (Nakamura 89)

Nakamura's analysis resonates with Thomas's PersonalSpace project, which explicitly aims to exoticise and commercialise a particular set of experiences for

the consumption of an archetypal “‘first world’ user”. It also relates to earlier concepts of the Web as representing a “world without limits”, as conveyed in the comparison with unbounded exotic spaces in *Patchwork Girl* and *The Powerbook*. Although the process of exoticisation in those accounts is confined to the depiction of places and objects rather than people, they share an impression of “technologically enabled transnationality” which celebrates the capacity of the individual to “metaphorically go where he likes” (Nakamura 89).

Though she acknowledges that “[i]n the early days of the Net, technological visionaries imagined the online world as a utopian space where everything—even transcending racism—was possible,” Nakamura concludes that “the Internet ‘revolution’ is over,” and “our ideas about race, ethnicity, and identity continue to be shaped and reshaped every time we log on” (xi-xii). She suggests that “[d]ifference, in the form of exotic places or exotic people, must be demonstrated iconographically in order to shore up the Western user’s identity as herself” (92), and her examination of the use of geographically remote and unfamiliar territories, and their rustically caricatured populations, exemplify a gap between the assumed privilege of the Western ‘reader’ or ‘viewer’ and the relative poverty of the scenes presented. As she notes, and as in Thomas’s description of PersonalSpace, this process of exoticisation is performed under the guise of encouraging further discovery of these areas, via the safe intermediary forms of written and audiovisual texts.

In *Control and Freedom*, Wendy Chun juxtaposes the average “banality” of users’ actual experience of the internet with marketers’ promises of access to a luridly exotic “frontier” space. For Chun, late-nineties technologies marketing employs a rhetoric of exclusion in order to make the Web “desirable, especially to those who have yet to experience its banality” (Chun 254). Thus commercials “lure people onto the Internet with the threat of being left behind – they do not reassure people that everything will be ok” (254-55). The interrelation of banality, exoticism and the risk of exclusion is considered in great detail in *Look At Me*. Like the narrator of *The Powerbook*, obsessed with the pursuit of the elusive high of transcendent desire, Charlotte in *Look At Me* longs to be “extraordinary”. In the opening to her story, she bitterly remembers the frustration of her fading

career as a professional model. The encroaching diminution of her professional status is expressed in a series of dismissive vignettes depicting the scenarios she has been employed to perform in the later phase of her dwindling modelling career. She recalls representing women whose ordinariness is characterised by bodily mishaps and domestic detail: ‘blushingly recounting the trauma of passing gas during a board meeting’ or ‘[u]rging fortified granola on her freckled son’ (187). The mundane nature of the situations she has been paid to simulate are symbolic of the distance between Charlotte’s own circumstance and the ‘transcendent existence’ she has sought.

When she is offered the opportunity to sell the story of her accident and recovery as an “Extraordinary” character, Charlotte initially dismisses her own experiences as ‘too boring’ (251). Her process of self-narrativisation is made more complex by this sense of herself as simultaneously banal and exotic. As I have described, Charlotte’s emblem of transcendent fame is a vision of a “mirrored room,” a space defined in terms of its inaccessibility and indescribability. The room, and its occupants, are rendered incomprehensible by their removal from the strictures of ‘everyday’ existence. For Charlotte, the mirrored room is “a place I had never seen and knew little about” (163), and ‘the famous people who lived there were not the sort you saw, or could talk to’ (163). When a modelling opportunity offers the prospect of entering this hallowed space, Charlotte nostalgically contemplates her ‘small’ life as if it is soon to be entirely redundant, left behind as she enters the transcendent space of unimaginable wealth and fame. “So close did I feel to the mirrored room,” she observes, “that I experienced an anticipatory nostalgia for the sweet, small life I would soon cast off; its every detail felt precious” (172).

When Charlotte contemplates selling herself to the Extraordinary People project, she begins to recognise the power of her own potential as a narrative subject with a gigantic potential audience. The perceived banality of the everyday resurfaces when Charlotte measures the physical ‘detail’ of a cast-off life with the ‘invisible, infinite’ nature of a story still untold:

I reviewed the list of other things I could sell: apartment, clothing, sectional couch. They were only things; first one, then another, then

another. Then they would all be gone. But a story was invisible, infinite, it had no size or shape. Information. It could fill the world or fit inside a fingernail. (258)

Charlotte's reference to a capacity to 'fill the world' suggests the power and scope of the fame she still hopes to attain, while the possibility that 'information' might 'fit inside a fingernail' recalls the tiny forms of data storage enabled by progress in computing technology. Haraway describes the increasing 'miniaturisation' (Haraway, "Manifesto" 153) of physical storage of information, enabled by the use of the silicon chip as 'a surface for writing' (153). For Haraway, this miniaturisation is matched by an escalating ease of transmission, with the result that '[m]odern machines are quintessentially microelectronic devices: they are everywhere and they are invisible' (153). Charlotte's description of the nature of the limitless 'information' of her potential story echoes such rhetoric; it is not only the story itself which is 'invisible, infinite,' but also the capacities of the technologised realm which will disseminate it. For Charlotte, these powerful unknown expanses are simultaneously thrilling and terrifying.

Haraway's statement on the differential between 'modern' and earlier machines anticipates Gilles Deleuze's argument for a transition from a 'machinic' age to one of networked devices, which he characterises similarly in terms of its reach and invisibility, defined by 'ultrarapid forms of free-floating control' (Deleuze, "Postscript on the Societies of Control" 6). Whereas Charlotte dismisses the finite value of objects when she briefly revels in the infinite potential of her 'story', later in the novel, another character, Moose, contemplates his nostalgia for '[o]bjects existing in time and space'. Again, 'information' is portrayed as free-floating – 'without context' – this time abhorred by Moose as the 'inversion of a thing':

[T]hings had lost their allure generations ago, shunted off to countries where people would make them for less. And information was the inversion of a thing; without shape or location or component parts. Without context. Not history but personal history. (357)

Both characters act as mouthpieces for a Deleuzian sense of seismic shifts in society, a move to a culture of smooth, intangible systems whose ubiquity is, as

Moose puts it, 'without shape or location'. In an apocalyptic closing scene, Moose rejects his vision of a society constituted by 'madmen who were no one, who were nothing but a series of impressions. Who were information, jumbled and soulless as the circuitry in which they mostly lived' (496). Charlotte dabbles with the edges of this imagined world of 'information', determined not to be left out of a 'great glittering future' prophesied by Moose and described by Thomas.⁵⁷ Yet even as she attempts to create and market her 'personal history', Charlotte seeks to protect herself, to distance herself from a 'glittering future' living amidst 'circuitry' by insisting on the importance of 'things': her 'apartment, clothing, sectional couch'. These 'things' give an illusion of anchored context for Charlotte's story, providing its shape and location. They are also an important aspect for PersonalSpace, which eventually asks for a constant video loop of Charlotte's apartment, removing her entirely from the 'shape' of a written story, replacing it with a web-based, infinitely unreeling narrative.

Charlotte's role as an "Extraordinary Person" involves publishing her life story online in continuously updated instalments. She dabbles with this imagined world of 'information' partly because, like the assumed viewers of the marketing materials considered by Nakamura and Chun, she is determined not to be left out of the 'great glittering future' prophesied elsewhere in the novel. Unfamiliar with the internet or computing technology, however, she fears that she will be unable to comprehend or navigate the electronic domain she has been lured into by the promise of fame and money. For Charlotte, the technologies involved in publicising her story *are* the exotic aspect, defined in terms of their unfamiliarity as an as-yet incomprehensible expanse of data. Charlotte is quick to acknowledge both her ignorance of the internet and her practical deficiencies as a writer. In the presence of the professionals who persuade her to sell her story, she is "buoyed by frothy excitement, a jittery sense that the events they narrated were already in motion, hurtling me inexorably along" (256). Away from these expert narrators, however, she feels "cowed" by the prospect of the project, unable to conceive or

⁵⁷ Discussing fear of being left out and "technical ineptitude", Margaret Morse argues that "Lack of access to the technology of information society threatens to screen out vast parts of the world population behind a curtain of silicon, producing socio-economic disparities that are even more acute. [...] To be left out is not merely privation - to some, freedom from constant technological innovation would be a welcome condition - but rather, to become part of a shadow world influenced by but having little influence on the flow of value and the exercise of power" (Morse, "Virtually Female: Body and Code" 29)

imagine its “events” for herself. Charlotte’s ambition is briefly stymied by fears that she is intellectually and emotionally unable to supply the story they have requested:

I felt cowed. I could hardly read anymore, hardly write. I despised talking about myself. For years I had lied to avoid it, feinting and darting, obfuscating slyly, lying because it was easier, because I felt like it. Lying to erase the truth, though this never seemed to work. (256)

Charlotte’s awareness of her intellectual and emotional reticence is matched by her technical shortcomings, with her only experience of the internet ‘limited to a few tentative spins’ on her agent’s ‘computer at work,’ a circumstance which leads her to ‘bluff comprehension’ (245). Yet even as she determines not to agree to the project, Charlotte finds herself beginning to self-edit her actions and memories, segmenting her thoughts into the neatly navigable sections already provided by the PersonalSpace rubric: ‘Childhood Memory’, ‘Regret/Missed Opportunity’ (257). Segmented and stripped down, the technologies involved appear temporarily banal and manageable, and Charlotte launches herself on a project with the initial hope of achieving the fame, money and cultural capital she has not achieved in her career as a model—access to what she figures as an inaccessible ‘mirrored room’, tantalising yet out of reach.

To overcome her deficiencies as a writer, Charlotte recruits Irene, an acquaintance who she believes to be a journalist, to supplant the technical and literary skills which Charlotte lacks. The typed, edited, embellished versions of Charlotte’s life which Irene produces are ‘professional’ and ‘realistic.’ Their evident expertise leads the director of PersonalSpace to express his doubt that Charlotte herself could have written them. When the director enthuses that the writing is ‘fantastic! A thousand percent better than I expected’, Charlotte is both insulted by his assumption that this is not her own writing, and proud that she has been able to source a skilled writer as her narrative enabler. However, Charlotte becomes increasingly troubled by her own loss of control over her narrative’s trajectory. As the novel unfolds, Irene’s ability to problematically ‘ventriloquise’ Charlotte’s spoken tales from scribbled notes to personal memoirs

which are simultaneously alien and recognisable to Charlotte, leads to a gradual shift in the balance of power between the ghostwriter and her subject.

Speculating on the nature of storytelling, the heroine of *Patchwork Girl* muses that “we are all ghost writers now”. In *The Powerbook*, the opening announces that the e-writer Ali will “writer to order anything you like,” but warns that “you” must be “prepared to enter the story as yourself and take the risk of leaving it as someone else”. In *Look At Me*, issues of possession and agency re-emerge through the use of figurative language of assembly and transformation. Irene, Charlotte’s ghostwriter, is initially reluctant to take on the role, dismissing it as “assembling your life story for some Orwellian on-line service” (263). Yet after she begins writing, Irene gradually assumes the role of imaginative creator. With the prospect of wealth and success glowing in the distant future, Irene finds that Charlotte’s voice suddenly comes easily to her, and is simultaneously transformed:

Now, thus electrified, she stared at her screen. I, she typed. Then consulted her notebook, letting the memory of Charlotte’s voice soak her mind until, with a ventriloquism that still amazed Irene, words tumbled from her in a voice that wasn’t her own or Charlotte’s but a hybrid, an unholy creature that was Irene’s creation, too, fed by the cheap detective novels she still gulped down when she had time. She could hardly type fast enough. (301)

In the production of “a hybrid,” an “unholy creature,” Irene’s creation is “fed” by the fictional works she has already devoured. When she stares, “electrified” at her screen, it is not only the lure of money and success which galvanises her, but also a strange “ventriloquism” in which she feels herself surrendering to a voice which is neither hers nor Charlotte’s. The language of this description echoes the process of monstrous creation in *Patchwork Girl*, where the creature’s written ‘birth’ is described as ‘a disturbance in the flow’, and she defines herself as ‘multiple, and because I am mixed, mestizo, mongrel’. In the production of ‘a hybrid’, ‘unholy creature,’ Irene’s creation is ‘fed’ by the fictional works she has already devoured, just as the heroine of *Patchwork Girl* is figuratively stitched together from others’ stories. Her process, allowing her mind to be ‘soaked’ in Charlotte’s voice, is

strikingly similar to the sense in *Patchwork Girl* that the narrator acts as ‘filter’, ‘receiver’ of others’ words and others’ stories.

Irene’s ability to select certain aspects of Charlotte’s life’s “raw material” while ignoring others initially leaves Charlotte in a state of frenzied anxiety. However, she also becomes increasingly disturbed by her own loss of control over her narrative’s trajectory. When Irene and the director, Thomas, tell Charlotte that a homeless man she has befriended is not a plausible aspect of her PersonalSpace narrative, she begins to become aware that her role is to provide a bodily presence, a name, figure and location, whose actions are then molded into a marketable ‘story’ by her writer:

I crossed my arms, stilled by a revelation that had been mounting in me... that as the ‘subject’, I was both the center of attention and completely extraneous. The feeling brought with it an eerie, stultifying familiarity; I was still the model, after all. I was modeling my life. (325)

Recognising this process even as she finds it disturbing, Charlotte is initially comforted by comparing the process of fictionalising her life for public consumption with her experience as a professional model. Her insight is accompanied by a bodily gesture of defence or defiance, as she concludes that her position as ghostwritten ‘subject’ makes her simultaneously central and ‘extraneous’ to the process of writing her own story. As the novel unfolds, however, Charlotte becomes increasingly aware that her ghostwriter’s ability to “ventriloquise” her spoken tales leads to a measure of dissociation. Once they have been transformed by Irene from scribbled notes to personal memoirs, the accounts are simultaneously alien and recognisable. Just as the narrator of *Patchwork Girl* briefly fears that her words, once detached from herself, will become “as hurtless, juiceless, entertaining and purely factual as anyone else’s,” Charlotte is perplexed by the “eerie” sensation which accompanies her recognition of her own status as narrative “subject” (325). It gradually becomes clear to Charlotte that her life is being modelled on her behalf, and that her level of narrative agency decreases the more successful Irene’s “ventriloquism” becomes.

In her introduction to *The Postcolonial Marketplace*, Sarah Brouillette declares that she wishes to draw out “the signs of authors’ questing after a modicum of agency, however imperfect and delusional their results might be” (Brouillette 176). For Brouillette, authors seek to attain that “modicum of agency” partly by demonstrating their awareness of the cultural capital arising from their capacity to recount relatively marginal experiences from a supposedly authentic point of view. This leads the author to adopt, whether consciously or unconsciously, what she calls a kind of “insider/outsider positioning” (Ibid), adapting “authentic” material for a privileged distant audience, while maintaining sufficient levels of exotic detail to capture the imagination of their readers. This is precisely the process required of Charlotte and Irene in *Look at Me*, who must provide an “extraordinary” story in a way which still maintains sufficient familiarity and recognisable traits to seem manageable and accessible for its paying audience.

As she attempts to transform the ‘raw material’ (263) of her life to a suitably ‘extraordinary’ story on the website PersonalSpace, Charlotte is increasingly troubled by the transition from opaque, material individual to fluid internet-based character. Her resistance to the process begins with her refusal to engage with the technological platform required, and develops into an admission of the physical strain of being narrativised. For Charlotte, the process of telling her story is not a game or inventive process but a bodily strain. ‘My body was grinding with the effort,’ she recalls as she describes beginning to tell her story to Irene, ‘squeezing my words from my solar plexus’ (265). She is initially rewarded by evidence of the listener’s excitement, as Irene’s cheeks flush, and Charlotte feels ‘the warm reach of her curiosity’ (265). Yet the assumed but absent audience necessary for Charlotte to achieve the ‘exposure’ she has craved become an increasing source of concern as she loses control over her own narrativisation. Disoriented by the process of being fitted into the carefully selected ‘chain of existence and events’ (Jackson) demarcated as ‘her’ story, Charlotte eventually attempts to wrest back a modicum of control by reading Irene’s version of her narrative, searching for her ‘place among the printed pages’ (463). She finds a ‘ventriloquism’ that is both familiar and bizarre:

[T]hings began to go haywire. I found it disorienting to read my own words, or something like my words – not my words at all, actually, but a ventriloquism of Irene’s that for some reason even I believed – typed neatly onto a page, like a document. I was resorting to it now because the alternative – that hundreds, thousands, even hundreds of thousands (according to Thomas) of computer-fondling strangers should read this stuff without my having done so first – seemed immeasurably more awful. (456)

Irene’s version of Charlotte’s words is demarcated within the novel by an alteration of typography, which switches to the Courier font to give the impression of a typewritten “document.” For Charlotte, who once craved ‘exposure,’ the prospect of those ‘hundreds of thousands’ of potential readers is suddenly a source of anxiety. These are people she considers alien in their ‘computer-fondling’ strangeness, people aligned with the dominant technophiles in the story whose swift expertise and unfamiliar vocabulary has left Charlotte feeling repeatedly ‘cowed’. Significantly altered and remodeled for technologised public consumption, yet still convincingly familiar, Charlotte finds that this transformation of her ‘words’ is comparable to her face’s surgical reconstruction. They are recognisable yet fundamentally altered, disorienting in their altered familiarity.

As Charlotte grapples with the strain of being filtered for the web, she fails to adapt fluidly to her role as simultaneous ‘subject’ and ‘narrator.’ Constantly running her actions through a performance description in her head, this obsessive self-documentation leads to imagery of bodily disintegration.

And here was the problem, here was the worry scabbling like mice behind these brightly painted panels of picturesqueness: I was peeling apart in layers. I was breaking into bits. She was coming apart at the seams ... my head buzzing with a confusion of junk noise, white noise, space junk, a junkyard of noisy thought that made me long instead for a lovely, petaled silence. (408)

In this and its surrounding passages Charlotte’s identity begins to dissolve, spliced between the ‘I’ of this narrative and the ‘she’ of Irene’s ghostwritten version. “Breaking into bits” and “coming apart at the seams,” her disintegration recalls

that of the monster in *Patchwork Girl*, whose stitched and seamed body also falls apart in a drastic recompense for her attempts to achieve smooth cohesiveness of body and narrative. The creature in *Patchwork Girl* becomes similarly obsessed with what she calls the 'fixedness' of words when she fears that her narrative, once detached from herself, will become "as hurtless, juiceless, entertaining and purely factual as anyone else's", and declares that she does not wish to "be a reclusive beetle disappearing into a sheaf of papers". This simultaneous display of willingness and seeming resistance casts the protagonists of both texts as 'extraordinary' beings whose process of narrativisation is made more complex by their sense of themselves as simultaneously banal and exotic.

Charlotte in *Look at Me* eventually faces the intrusion on her personal world when she realises that Irene's words – which are also hers – will be read by 'hundreds, thousands, even hundreds of thousands... of computer-fondling strangers' (456). As she reads the typescript pages, this emotional intrusion is suddenly echoed by the physical invasion of more pressing physical aspects of her environment:

As I searched for my place among the printed pages, the whine of an electric saw rose from the cornfield and the sound of locusts seemed to sharpen in response – a fierce, rhythmic chatter, like a legion of monkeys. (456)

Locusts, monkeys, 'rhythmic chatter'. Just like the scuttling beetle disappearing amid sheafs of paper in the quote from *Patchwork Girl* cited above, this imagery is simultaneously familiar and unfamiliar, conventional and exotic. As a means of interpolating emotion, it serves to remind us of Thomas's 'exotic' aspirations at the same time as expressing Charlotte's fear of a swarm of unknown readers. Such anxiety is augmented by a sense of the unknowability of the material forms used in individual representation. It is also another example of the use of landscape and environment as a means of conceptualising the results of an imagined electronic presence. The exotic detail is not only important in the representation of characters' emotional and intellectual interpretations of technology, but also as a way of capturing their implied use of writing technology as a form of touristic commodity.

In Egan's novel, the exploitation of exotic imagery and commodification of what Brouillette calls an 'insider/outsider' authorial position is satirised as a deliberately commercial practice. As with *Patchwork Girl* and *The Powerbook*, imagery of exotic and unfamiliar scenes and concepts is used to convey a sense of combined dread and excitement when constructing narratives of both past and future, illustrating and also questioning contemporary responses to new technological phenomena. Ultimately, the 'Charlotte' that Irene has rendered appears a stranger, disowned by the version of Charlotte who is the first-person narrator for this thread of the novel's storyline. The prospect of being constantly narrated prompts a fragmentation of identities, and in the novel's epilogue, "Charlotte" has sold her narrated PersonalSpace identity for a 'large sum,' preferring to sink into comfortable obscurity while Irene, her former ghostwriter, occupies the glittering space of celebrity she once craved. Though they each deploy strikingly similar metaphorical sets to conceptualise electronic space, the three narratives discussed in this chapter reach vastly different conclusions. *Patchwork Girl* concludes with the successful melding of body and environment, and *The Powerbook's* narrator pledges to maintain her online presence, endlessly searching for her idealised reader/subject, whereas *Look at Me* ends with a contrasting scenario which literalises a radical division between "material" and "ephemeral" versions of the same person.

CHAPTER 4: SPEED IS EVERYTHING

In the third chapter of *The Powerbook*, Jeanette Winterson depicts two individuals communicating quickly online. Exchanging short staccato sentences, the pair are described as poised, “separated by distance, intimate of thought” as each awaits the other’s response. “What were we waiting for – fingers resting lightly on the board like a couple of table-turners?”, muses the narrator, Ali (Winterson 26). Eventually, her interlocutor ceases to reply, escaping into the anonymous, amorphous mass of the Web. “You had run out on the story,” Ali complains, and a situation which had been described in terms of playful equality is suddenly restructured as an unfulfilled dialogue between penitent and confessor:

I want to tell you how I feel, but there’s nobody on the other side of the screen.

What did I expect?

This is a virtual world. This is a world inventing itself. (Winterson 63)

Ali’s frequently repeated statement that “this a virtual world” is framed by a sombre acknowledgement of the negative implications of this “virtual” status. Temporarily unable to locate her lost interlocutor, Ali’s reinterpretation of the computer screen renders it as a kind of intimate partition, this time finding that there is “nobody on the other side” (Ibid). Her rhetorical question – “what did I expect?” – reaffirms the impression of abandonment, as she is left to conduct a half-conversation with herself. Here, the thinking, feeling, responding immediacy of a human interlocutor is replaced by the expanse of undifferentiated information: a “virtual world” in a permanent state of reinvention.

The dynamics of power, control and absence associated with the distant-yet-intimate online address in *The Powerbook* are an essential factor in the Web-based works of Young-Hae Chang Heavy Industries (henceforth YHCHI). Created using the multimedia animation program Adobe (formerly Macromedia) Flash, YHCHI’s pieces follow an extremely simple principle, with monochrome words or sentences appearing consecutively on the screen, always in the same font

and accompanied by a jazz soundtrack. The works are exclusively text-based, conjuring the impression that a narrator somewhere “on the other side of the screen” is relating their thoughts, as “real time” text. Winterson’s phrase “separated by distance, intimate of thought” perfectly captures the tone evident in many of YHCHI’s works, where an unseen and unnamed individual describes personal experiences, sensations, and impressions, usually addressed directly to “you,” their assumed reader. However, just as Winterson’s narrator is forced to admit that there is “nobody on the other side of the screen,” YHCHI’s works play with the unusual dynamics of a disembodied dialogue. The “conversation” presented by these works is fundamentally one-sided, uncontrollable by their reader, whose responses are repeatedly assumed or construed for them. This figurative silencing is exacerbated by YHCHI’s use of the Flash format to control the pace at which the works must be read; fluctuations in the speed of the texts’ fleeting appearance onscreen mean that the “assumed reader” is often left struggling to keep up with the narrative, and the seemingly conversational style is both distorted and exaggerated.

My reference to YHCHI’s manipulation of an “assumed reader” is drawn from Johanna Drucker’s analysis of “marked texts” from the nineteenth and early twentieth century in *The Visible Word*. Describing the flourishing of typographic variety and experimentation in the aesthetic appearance of page layouts, Drucker finds that “marked texts” often addressed an “assumed reader” more “aggressively” than their “unmarked” counterparts:

Any text assumes a reader and marks that assumption to some extent. The texts which I am calling unmarked attempt to efface the traces of that assumption. The marked text, by contrast, aggressively situates the reader in relation to the various levels of enunciation in the text—reader, speaker, subject, author. (Drucker, *The Visible Word* 97)

When she lists characteristic features of “the language used in advertising,” Drucker notes that marked language “tends toward direct address... The emphasis is on the *recipient* of the message rather than on the speaker” (Ibid). YHCHI’s aesthetic experimentation and use of direct address resonates with Drucker’s analysis of the “marked text” as one which “aggressively situates the reader” in

relation to differing types of enunciation. The individual encountering YHCHI's work online is not only required to function as a reader: they are cast alternately as speaker, subject, and potential author, and these changing roles are often indicated by visual cues permitted by the text's aesthetic appearance.

As in the texts Drucker describes, YHCHI's work uses strategies drawn from graphic design and commercial advertising to underscore their audience's shifting roles. However, although YHCHI's formal approach deploys the capacities for speed and motion offered by the Web as a publishing environment, certainly drawing on design principles to increase the pieces' visual impact, these texts are not "marked" in quite the same sense discussed by Drucker. Describing the facets of C19th print advertising adopted in Dada and Futurist works, Drucker recounts an array of techniques, including "a wide range of type faces, styles, and sizes... the breakup of the page into various zones of activity... the use of circular, shaped or diagonal elements across the normal horizontal page; the use of vertical elements" (Drucker 96). YHCHI shun almost all of these options, using only one typeface, avoiding circular, diagonal or vertical elements, and only rarely indulging in the "breakup of the page" into "zones of activity" (Ibid). Instead, they deploy alterations of typographical scale and the changing pace of words' appearance onscreen in order to control and influence a reader's encounter with their text. Drucker demonstrates that Dada writers and artists redeployed the visual techniques of late C19th commercial print advertising in order to draw attention to the tactile and visual specificities of the medium of print; YHCHI's works perform a comparable trick by adopting elements from television and film advertising to explore the new medium of the Web.

YHCHI's commentaries in interviews and essays reveal the importance of speed and scale in ensuring their work's powerful impact on an "assumed reader". Speculating on how readers' approaches might alter in a Web-based context, they suggest that "speed is everything" in this online environment:

There's a tendency to read quickly on the Internet. Speed is everything, and densely written texts, be they creative or critical, seem to make the reader anxious. (YHCHI, "Interview with Thom Swiss" n.pag.)

Pursuing their stated mission to make Web art “as entertaining as TV” (YHCHI, “Interview with Hyun-Joo Yoo” n.pag.), YHCHI combine the pace of texts’ appearance onscreen with a practical endeavour to ensure the work plays quickly in users’ browsers. “We wanted to give you a full-screen experience with little or no download time,” they recall in a 2008 interview, suggesting that “20 seconds seems to be the psychological threshold. If you had to wait any longer, you would click away” (YHCHI, “Interview with Isabel Polon” n.pag.). YHCHI’s anticipation of a click-happy reader swiftly skimming over content, devouring information quickly yet becoming “anxious” at the prospect of “densely written texts,” echoes an oft-expressed concern regarding readers’ attention-span when encountering text in new media environments.

N. Katherine Hayles is one of the most prominent critics to consider a relation between inattention, literary forms, and the online environment.⁵⁸ Discussing the responsive tendencies of readers in new media environments, Hayles concurs with YHCHI’s impression that “speed is everything” online, proposing a distinction between two separate cognitive styles, “hyper” and “deep” attention. For Hayles, “hyper attention” is characterized by “switching focus rapidly among different tasks, preferring multiple information streams, seeking a high level of stimulation, and having a low tolerance for boredom” (Ibid). She contrasts this with “deep attention,” which involves “concentrating on a single object for long periods,” “ignoring outside stimuli,” with “a high tolerance for long focus times” (Hayles, “Hyper and Deep Attention” 187). Her illustrations of deep attention in the article are an individual reading a pre-twentieth century novel – in this case, Dickens and Austen. By contrast, the hyper attentive reader “excels at negotiating rapidly changing environments” (188), and this definition underpins Hayles’s evaluation of YHCHI’s distinctive style and demanding aesthetic in the context of “information-intensive settings” (Hayles, *New Horizons* 125). Describing their work *NIPPON*, she finds that it presents a challenge to both the reader and its own framing medium:

⁵⁸ Hayles’s analysis has been extremely influential. For example, Nicholas Carr echoes her terms in *The Shallows* when he observes that “I used to find it easy to immerse myself in a book or a lengthy article,” before explaining that “[n]ow my concentration starts to drift after a page or two [...] The deep reading that used to come naturally has become a struggle” (Carr 5). Carr blames this on the internet, which seems to be “chipping away my capacity for concentration and contemplation” (Carr 6).

The work proceeds at speeds rarely coinciding with a comfortable reading rate, either lingering longer than the reading requires or flashing by so quickly one must strain to catch all the words. The effect is to introduce a disruptive temporality into the spatiality of the (presumptive) page, converting it into a hybrid form in which spatiality and temporality compete for dominance in the place of reading. (Hayles, *New Horizons* 125)

Hayles's speculation on a competition for dominance between "spatiality and temporality" conveys the difference in scope of an autonomously moving text. However, it sits somewhat uneasily with YHCHI's recognition that their reader might choose to "click away" at any moment. In fact, Hayles' conception of a "disruptive temporality" which might transpire "*in the place of reading*" is significant only as long as the individual continues to try to decipher the text. The competition "for dominance" in YHCHI's texts is not a contest between spatiality and temporality, but rather a way of exploring the distinction between the text's impact as a visual object and its meaning as a written narrative.

The aesthetic challenge of YHCHI's texts springs from an assumption that the reader will persevere in attempting to construe narrative meaning, despite the possibility that the text may be rendered illegible by its increasing pace. In other words, YHCHI set up a readerly experience which is effectively a hybrid between Hayles's definitions of "hyper" and "deep" attention, demanding that a reader concentrate on the "single object" of their text, ignoring "outside stimuli" (Hayles, "Hyper and Deep Attention" 187). Although they are frequently fast-paced, offering a "high level of stimulation" akin to Hayles's interpretation of "hyper attention," YHCHI's works also challenge readers' text-skimming tendencies by employing an all-or-nothing format which actively resists the possibility of following "multiple information streams" (Ibid). This effect is compounded by their refusal to permit physical control over the text's pace of display, with the video files' pause, stop, fast-forward or rewind buttons all disabled. Unfurling intensively onscreen, with no possibility of pausing, accelerating or re-reading parts of the text, YHCHI's works deliberately discourage their reader from casually switching focus. Instead, they ensure that "clicking away" must be an emphatic rejection of the work, rather than an

expression of divided or partial attention. This insistence on an all-or-nothing choice raises concerns about the interplay of allure and control; YHCHI's texts perform an insouciant indifference which constantly challenges their reader to "click away" while confidently assuming that they will stay.

The struggle with illegibility involved in encountering YHCHI's fast-moving texts embraces the possibility of readerly incomprehension or misunderstanding. It also thematises this experience as a means of contemplating hierarchies of control and power in contemporary media environments. Critics have tended to focus on high-speed aspects of YHCHI's works, and the first section of this chapter considers a number of literary and artistic precedents for their formal approach. However, YHCHI do not cater thoughtlessly to a readerly need for speed. As with the experimentation with boredom and inertia explored by video artists of the Fluxus movement, they frequently set out to test readers' levels of endurance and concentration. The second half of this chapter considers how YHCHI's deliberate challenge to an "assumed reader" enacts thematic concerns depicted within their narratives, where characters repeatedly question, comply with, or unwittingly expose difficulties of interacting with technologies and corporate systems whose function and process individuals may struggle to comprehend. In Chapter Two of this thesis, I discussed the appearance of opaque technological processes in descriptions of the computer as a mysterious and uncontrollable object. Here, I build on these perceptions to consider how YHCHI's use of the internet as a new multimediu(m) offers a way to re-enact individuals' loss of control in the face of increasingly commercial interests found in technologised environments. Exploring the convergence of form and theme in YHCHI's work, I argue that YHCHI's dictatorial use of the Flash media format not only encourages their assumed reader to become self-conscious about the act of reading, but also sets out to reveal specific qualities of the Web-based encounter in which the individual is implicitly involved, intersecting with thematic concerns with globalisation, consumer culture and new media.

YHCHI's Flash works are comprised of bold, usually monochrome

segments of text which appear and are swiftly replaced in a series of frames onscreen. The opening lines of their most well-known work, *DAKOTA*, are intrusive, gigantic, with solitary words swooping in to fill the screen before immediately disappearing to be replaced by the next. None are stationary. The first word, “FUCKING”, appears full-size, filling the screen, then lingers, shifting as if shaking or vibrating at a heavy impact, before shrinking to the centre of the frame and disappearing. It gives way to the consecutive frames “WALTZED” and “OUT”, which again fill the screen before disappearing in quick succession, staying visible for a maximum of 2 seconds each (Fig. 1). The incoming text is synchronised with the accompanying soundtrack, a recording of jazz musician Art Blakey’s live performance of “Tobi Ilu,” and the arrival of each new word is timed to coincide with a clash of drums, contributing to the declarative force of each word’s appearance on screen. The fleeting appearance of these words alternately demand attention and elude the reader’s grasp, as they announce themselves with brazen panache before disappearing from sight almost immediately. In addition, a reader attempting to engage with YHCHI’s works is denied the opportunity to re-read or absorb the text at their chosen speed, since the texts proceed at a rate which the reader is unable to control.⁵⁹ Processing the text of a poem such as *DAKOTA* demands visual dexterity from its audience, but does not anticipate verbal pronunciation – for example, the third word of *DAKOTA*, “OUT”, disappears from the screen too quickly to speak it aloud. As *DAKOTA* nears its conclusion, words and phrases flash up at an ever-increasing rate, producing an effect of swift partial illegibility.⁶⁰

⁵⁹ In *Aggressive Fictions*, Kathryn Hume considers speed as a tactic “for distancing and alienating readers,” which “produces contradictory effects. Insofar as it undermines rational structures for control, it makes us feel inferior yet also offers an exhilarating rush. If we relax and let it flow, then speed encourages passivity; its flashiness makes it a kind of spectator sport at which we watch the bravura performance rather than engage actively with characters. By refusing answers to any problems raised though, speed demands active thought and, ultimately, judgement. Speed challenges us, but what we do with the import of the text remains our own decision” (Hume, *Aggressive Fictions* 165)

⁶⁰ Roberts, Otty, Fischer & Schaffner question the illegibility of *DAKOTA* and other texts, contending that “YHCHI’s works are never, in fact, impossible to read as such; rather they challenge our sense of control and our wish to reflect or perform higher-level processing.” (Roberts et al n.pag.). This is based on experiments in Rapid Serial Visual Presentation (RSVP), where words are flashed up on a screen individually, suggest that “RSVP presentation facilitates *faster* reading” (Roberts et al n.pag.). According to findings from RSVP experiments, the human brain is capable of reading words “at presentation speeds exceeding 1,000 words per minute or seventeen words per second,” although “just three or four words per second would be typical of normal reading” (Roberts et al n.pag.).

FUCKING

WALTZED

ØUT

TØ THE
CAR,

Fig. 1

The use of solitary words and short phrases filling the screen in quick succession is a vital aspect of YHCHI's aesthetic project. On first encountering *DAKOTA*, the reader has no idea what will follow "FUCKING" – and is perhaps unlikely to anticipate the incongruously formal, majestic overtones of "WALTZED". By presenting apparently detached words which are nevertheless intended to be read as part of a strong narrative thread, YHCHI disrupt conventional expectations of encountering words which are part of a larger lexical structure within that context on a page or screen. YHCHI's refusal to allow readerly control over the pace of revelation raises the possibility of reading as a source of physical strain, as an "attention-challenged" reader attempts to maintain concentration. Brian Massumi argues that "however cerebral it may be," reading "does not entirely think out sensation" (Massumi, *Parables for the Virtual* 139), finding that reading is always related to bodily response:

When we read, we do not see the individual letters and words. That is what learning to read is all about: learning to stop seeing the letters so you can see *through* them. Through the letters, we directly experience fleeting visionlike sensations, inklings of sound, faint brushes of movement. The turning in on itself of the body, its self-referential short-circuiting of outward-projected activity, gives free rein to these incipient perceptions. In the experience of reading, conscious thought, sensation, and all the modalities of perception fold into and out of each other. Attention most twisted. (Massumi, *Parables for the Virtual* 139, original emphasis).

YHCHI's manipulation of "individual letters and words" deliberately distorts the transparency of letters and words which Massumi considers a learned aspect of reading. The level of physical concentration required to follow the narrative thread of a YHCHI text negates the likelihood of "fleeting visionlike sensations," while the addition of a carefully timed soundtrack aims to wrest back control over any possible "inklings of sound". As a result, YHCHI's texts foreground the way in which "conscious thought" is related to, and influenced by "sensation," since their visual intensity exaggerates the kinds of bodily sensations which Massumi associates with reading as a sensory act. In YHCHI's version of "attention most twisted," the twist is that the body is no longer permitted to "turn in on itself". In

the absence of space for contemplation or respite, reading is transformed into an exercise in physical endurance.

Hayles observes that YHCHI's works rarely coincide with "a comfortable reading rate" (Hayles, *New Horizons* 125), and the fast-moving pieces such as *DAKOTA* certainly seem designed to induce sensory discomfort. Any individual endeavouring to follow this work attentively is required to foreground the experience of the text as a sensory event, emphasising the effort of reading as a process of absorbing and distilling information. Thus the sensory accost offered by YHCHI's Flash poems exaggerates the bodily "sensation" of reading by foregrounding physical discomfort. In her 2004 introduction to a special edition of the journal *Social Text*, Patricia Clough considers a comparable level of affective onslaught in the context of everyday lived experience. Suggesting that technologies of surveillance and identity "mean to control bodies of information and to treat bodies as information" (Clough, "Future Matters" 3), Clough finds that these technologies seek to influence reactive "bodily capacities:"

Even when appealing to the human subject, these technologies aim to affect the subject's subindividual bodily capacities, that is, capacities to be moved, to shift focus, to attend, to take interest, to slow down, to speed up, and to mutate. (3)

Clough's understanding of the ramifications of technologies which attend to and impact upon the individual's "bodily capacities" resonates with the affective ambitions of YHCHI's domineering texts. YHCHI's work deliberately manipulates the reader into manifesting reactions which might include laughter, incredulity, or delight, but are equally likely to include anxiety, confusion, boredom or physical strain. By challenging speeds of perception, and refusing to permit control over the pace of their text, YHCHI ensure that the reader's responses – to *attend, take interest, slow down, or speed up*, borrowing from Clough's list – are denied the privilege of immediate control or intellectual reflection. As I argue later in this chapter, their texts aim to replicate the visceral experience of being affected and controlled by external technological factors, as they combine the uncomfortable pace of textual appearance with portrayals of

individuals who struggle with, or are undermined by, their encounters with technologised phenomena.

YHCHI's fascination with the interplay of speed and attention has led critics to affirm their work as offering "conciseness and captivating clarity... to a time-starved, attention-challenged audience" (Tribe n.pag.). However, the impression of "clarity" conjured by their use of bold, simple lettering is matched by a demand for increasing levels of focus. In *Digital Modernisms*, Jessica Pressman finds that YHCHI deploy a combination of speed, scale and sound in order to accost the reader:

The work hits you forcefully. The bold text, the charged prose, and the blaring beat produce an aesthetic of flashing literature unlike anything you've seen before and yet also so very familiar. Glued to the screen, unable to look away in fear of missing something, you feverishly follow the fleeting text. You find yourself speed reading and spellbound. (Pressman, *Digital Modernism* 78)

As Pressman suggests, those encountering YHCHI's work for the first time often find themselves simultaneously compelled by the challenge to follow the text, and disturbed by the unexpected difficulty of doing so. The onslaught of YHCHI's works propels even the most experienced and proficient reader into an uncertain encounter with texts rendered newly difficult by their movement onscreen; as Roberts et al observe, these pieces "challenge our sense of control and our wish to reflect or perform higher-level processing" (Roberts et al n.pag.). Like William Gibson's "Agrippa," discussed in the second chapter of this thesis, YHCHI wrest control over pace and re-readability away from their putative audience. However, whereas the silent upwards scroll of "Agrippa" mimicked the appearance and function of a page on a word processor, YHCHI's works deploy a frame-by-frame format which has more in common with techniques from television and cinema than anything natively familiar on the computer at the time they first began to publish works online.⁶¹ Deploying the Web's capacity to host multimedia files, YHCHI produce artworks which display an omnivorous willingness to reference

⁶¹ YHCHI's first Flash file was posted in 1999, six years before popular video file sharing site YouTube was created in 2005. Referring to their goal to "make the Web entertaining, like TV and the movies" in a 2008 interview, YHCHI stated that "we feel that the advent and domination of YouTube on the Web validates this initial goal" (YHCHI, "Interview with Jo-Anne Green" n.pag.).

earlier media forms and formats. Tracing their aesthetic influences exposes an enduring interest in the perceived power dynamics between artist and audience in various media, and I wish to consider some of these reference-points in detail, before offering an account of YHCHI's idiosyncratic and timely representation of personal encounters with the Web at the turn of the millenium.

The most frequently-discussed literary precursor for YHCHI's approach is Ezra Pound, an association prompted by their claim in a 2001 interview that *DAKOTA* constitutes a "close reading" of his *Cantos* I and II (YHCHI, "Interview with Thom Swiss" n.pag.). Pressman treats YHCHI's invocation of Pound as both "a declaration of alignment with a canonical work of literary modernism" and also "an invitation to read Dakota through Pound's first and second cantos" (Pressman, "Strategy of Digital Modernism" 303). In Pressman's reading, "YHCHI see the current state of electronic literature as one in which literature is 'not taken very seriously,'" and she suggests that they seek to "rectify this fact" by aligning their digital literature with "a work in a literary canon that is taken very seriously" (Pressman, *Digital Modernism* 82), casting YHCHI's reference to Pound as a "strategic" invocation of cultural capital in order to sidestep the perceived deficiencies of Web-based art.⁶² As demonstrated by Pressman's own choice of focus, YHCHI's early invocation of Pound has provided a central point for critical discussion and is almost certainly a factor in *DAKOTA*'s tendency to eclipse other YHCHI works in critical commentaries. *DAKOTA* makes an easy and appealing case study for comparison with Pound, since its line-by-line transposition of the *Cantos* updates classical figures to twentieth-century images, transforming the earlier poem's ship to a speeding car, Tiresias to Elvis Presley, Aphrodite to Marilyn Monroe, amidst a multitude of equivalent parallels. It also emphasises the relocation of the poem to a multiply interpretable "here," drawing

⁶² YHCHI suggested in 2001 that "there isn't much critical writing yet on Web writing. One reason is that it's a young medium. Another is that it's not taken very seriously (i.e., there's no money in it). Still another is that it's more satisfying to create than to criticize," adding that "maybe another reason for the dearth of critical Web writing is that there's nothing to criticize—Web writing might not be very good" (Swiss, "Distance" N.Pag.). Swiss himself observes in the introduction to *The World Wide Web and Contemporary Culture* that "most writing about the Web falls into the category of explanatory journalism; it remains largely unmapped in terms of contemporary cultural research" (Swiss & Herman, "The World Wide Web" 1). For further discussions of the dismissal of web-based art, see Hayles in *Electronic Literature: New Horizons for the Literary*, where she relates perceptions of a lack of quality to the relatively easy publication of works online, acknowledging those who wonder "will the dissemination mechanisms of the internet and the Web, by opening publication to everyone, result in a flood of worthless drivel?" (Hayles, *New Horizons* 2).

attention to the several locations of the reader, author-figures, and narrator.

However, the role of modernist thought and practice as a precedent for YHCHI's art extends beyond their use of Pound's text as a conceptual "scaffold," and other points of affiliation need to be traced in less schematic ways. As Pressman asserts, "*Dakota* uses speed to produce difficulty through illegibility" (97), and she compares this version of "aesthetic difficulty" with that of Pound and other authors of "high modernist" literature. Noting that "*The Cantos* are also famously resistant to interpretation" (97), Pressman treats YHCHI's occasional impenetrability as analogous to a veneration of intellectually demanding texts:

Pound's famous line from "Canto CXVI," "I cannot make it cohere," has become a tagline of sorts for the experience of reading *The Cantos* (and other works of high modernist literature). It is a mantra that YHCHI take up. Just as Pound claims that "the work of art which is most 'worth-while' is the work which would need a hundred works of any other kind of art to explain it," so too do YHCHI state, "We present our work the way we do to make it indeed more difficult" [in email to the author]. As is particularly and painfully obvious to *Dakota*'s dry-eyed and unblinking reader, speed is used as a technical tool to enhance the work's difficulty. (Pressman, *Digital Modernisms* 97)

Perhaps inevitably, the language of expertise slips into Pressman's examination of Pound and a modernist legacy in YHCHI's work, as she argues for a correlation between modernist valorising of literary difficulty, close reading, and YHCHI's challenge to their "unblinking reader." For Pressman, modernist texts "served to create a particular class of readers, professionals who could produce interpretations of these texts through the structured methodology of close reading" (97).⁶³ Yet this is where YHCHI's version of "difficulty" sharply diverges from Pressman's interpretation of the relation between close reading and

⁶³ I.A. Richards emphasises discipline, order and structure in *Practical Criticism*, declaring that "it is less important to like 'good' poetry and dislike 'bad', than to be able to use them both as a means of ordering our minds" (Richards, *Practical Criticism* 334), while Pound argues in his *ABC of Reading* that "[t]he Proper METHOD for studying poetry and good letters is [...] careful first-hand examination of the matter, and continual COMPARISON of one 'slide' or specimen with another" (Pound, *ABC of Reading* 17). The confluence of attention and expertise in the practice of "close reading" is evident in DuBois's summary that "attention, properly paid, will, over time [...] beget method." (DuBois, "Close Reading" 2), and Wood concludes that "[c]lose reading was rigorous reading, the opposite of loose or distant or offhand appreciation or criticism" (Wood, "William Empson" 219).

modernist experimentation. YHCHI's works can only be read "closely" (in the rigorous sense implied by New Critical practice) after an act of deliberate remediation, by rewriting them as a static transcript and thereby stripping away the carefully timed pace and soundtrack. Once transcribed to a static form, the pieces are fundamentally simplified, losing a significant proportion of their original aesthetic impact. Roberts et al disagree with Pressman's analysis, finding that the difficulty of the *Cantos* "is substantially a matter of content" and "form, both at the linguistic level (unconventional or fractured syntax) and at the literary level (a programmatic generic complexity)," whereas YHCHI's difficulty "is really only the mode of physical presentation" (Roberts et al, n.pag.).

While the self-conscious re-envisioning of Pound's *Cantos* in *DAKOTA* provides a useful starting-point for considering YHCHI's invocation of certain established aesthetic credos in their own work, it's also important to recognise that YHCHI diverge in crucial ways from the rhetoric of difficulty promoted by Pound and other "high modernist" authors and critics. Overemphasising YHCHI's affiliation with Pound and New Criticism tends to overlook the intimations of intellectual elitism and canonical selectivity which often adhered to these approaches. For example, it's tricky to align YHCHI's freewheeling declaration that they wish to "make Web art as entertaining as TV" (YHCHI, "Interview with Hyun-Joo Yoo" n.pag.) with Pound's more stringent approaches to intellectual effort and aesthetic difficulty.⁶⁴ Bearing in mind that the idea of "modernism" as an artistic movement was by no means a popular choice as a "scaffold" for digital poetry in the late 1990s, YHCHI's gleeful invocation of a modernist precursor might also be interpreted as an antagonistic move, a way of deliberately dissociating themselves from a tendency to position innovative online

⁶⁴ Partly because of his political views, Pound has become associated with emphasis on an intellectual and aesthetic elite, a view which tends to be borne out by quotations from his letters and essays. For example, referring to "the aristocracy of the arts" in 1914, Pound wrote that "[t]he artist no longer has any belief or suspicion that the mass, the half-educated simpering general [...] can in any way share his delights [...] Modern civilization has born a race with brains like those of rabbits" (Pound, "The New Sculpture" 67-68). Addressing Pound's approach to popular culture, however, Rainey finds it complex. Describing his response to a travelling variety show, Rainey suggests that it "left an impression on Pound," though he was "apparently disturbed by the 'vulgarity' of the show" (Rainey, *Ezra Pound and the Monument of Culture* 55), and considers this dilemma "exemplary for what it suggests about the interaction of popular and elite culture in modernism's formation" (Ibid.). Considering "difficulty's elitism," however, Diepeveen concludes that "an elitism based on what 'seriousness' implied—particularly intelligence and professional credentials—is not much less insidious than an elitism based on wealth, class, or gender" (Diepeveen, *Difficulties of Modernism* 238).

formats as inheritors of a specifically postmodern tradition.⁶⁵ Their invocation of Pound cheerfully contradicts the preference of commentaries on digital art and literature to shun the idea of modernist influences, as when digital poet and theorist Loss Glazier sealed his list of features associated with “non-innovative writing” with “attachment to a Modernist aesthetic” (Glazier, *Digital Poetics* 47). Glazier’s dismissal echoes Jameson’s controversial characterisation of “high Modernism” as “the establishment and the enemy—dead, stifling, canonical, the reified monuments one has to destroy to do anything new” (Jameson, “Postmodernism and the Consumer Society” 2). YHCHI’s use of Pound performs the neat trick of invoking a figure famous for announcing the need to “make it NEW” while challenging the views of those for whom a legacy of establishment elitism mean that modernist work is no longer associated with innovation and experimentation.

Pressman herself invokes aspects of newness and innovation when she notes that *DAKOTA* is both “unlike anything you’ve seen before” yet also “so very familiar” (Pressman, *Digital Modernisms* 78). The seeming familiarity of YHCHI’s work provides a clue to an extensive range of resonances, expanding beyond the precedent of Pound and providing an insight into YHCHI’s creative practice. Alan Liu observes that in 1997-98, developments in Web design “now allowed designers to [...] make the Web look more like familiar magazines, newspapers, TV/Video, and other pre-existing media” (Liu, *Laws of Cool* 214). YHCHI deploy this capacity for familiar replication without claiming to be visually innovative or even accomplished in the design and execution of their work. Once reduced to static form – as in the screenshots included in this chapter – the text is unadorned and the layout often wilfully simplistic. The sole aspects of note are their use of the font Monaco and the enlargement of words and phrases, always

⁶⁵ The most famous example of this alignment is Jay David Bolter’s assertion that “[h]ypertext is a vindication of postmodern theory” (Jay David Bolter, “Literature in the Electronic Writing Space” 24). This opinion has been much-critiqued, notably by Espen J. Aarseth, who finds that “[t]o claim that hypertext is fulfilling ‘postmodern theory’ [...] is an attempt to colonise several rather different critical fields by replacing their empirical object or objects on the imperialist pretext that they did not really have one until now” (Aarseth, *Cybertext* 83). Similarly, Lev Manovich outlines differences in technique when he argues that “the logic of the postmodern aesthetics of the 1980s and the logic of the computer-based compositing of the 1990s are not the same [...] Compositing in the 1990s supports a different aesthetic characterised by smoothness and continuity [...] where old media relied on montage, new media substitutes the aesthetics of continuity” (Manovich, *The Language of New Media* 142-43).

filling the screen entirely and either centred or left-aligned. With characteristic self-deprecation, the artists have suggested that this minimalist approach is a result their own lack of expertise:

As for the look of our work, we do what we can. We've never been interested in graphic design (a lot of Web artists – and even writers – start out or double as graphic artists). There are hundreds of fonts, millions of colors, and we don't know what to do about that. (YHCHI, "Interview with Thom Swiss" n.pag.)

This statement melds the claim to be innocent amateurs with an impression of the overwhelming potential of Flash software as a creative space. Later in the same interview, YHCHI explain that their "simple technique" deliberately "shuns interactivity, graphics, photos, illustrations, banners, colors, and all but the Monaco font" (YHCHI, "Interview with Thom Swiss" n.pag.). Emphasising disinterest in graphic variety, YHCHI associate uncertainty in the face of "hundreds" and "millions" of fonts and colours with lack of a professional design background, but they also pitch it as a return to what Young-Hae Chang has called the "essence of the Internet—information" (Chang, "Artist's Statement" n.pag.). "Strip away the interactivity, the graphics, the design, the photos, the banners, the colors, the fonts and the rest," Chang argues in an artist's statement for the website *Woven Maze*, "and what's left? The text" (Chang n.pag.). Chang's statement suggests that YHCHI's presentational mode, which refutes the bloating of decorative visual elements and the distraction of associative hyperlinks, might also be a way of drawing attention to an informational "essence" at the core of the internet's construction – the "plain text" which constitutes the structural backbone of all internet displays.⁶⁶

Despite YHCHI's early claims that the "look" of their work is a happy accident arising from their personal inability or disinclination to engage with the

⁶⁶ Despite their reference to "information" as an "essence of the internet," YHCHI do not attempt to reveal the underlying workings of the Web or the software required. Others do, however, most notably creators of "codework," a term coined by Alan Sondheim to describe "a type of idealised mode of writing in which the terminological and formal aspects of computer programming assume an 'aesthetic' function" (Armand, *Contemporary Poetics* xxii). Codework practitioners such as Mez (Mary-Anne Breeze), Talan Memmott, Ted Warnell, Brian Lennon, and John Cayley construct poetry from computer functions, intertwining the information with its means of display. For more on this "art of code" (Raley, "Electronic Interference" n.pag.) see Raley's "Reveal Codes: Hypertext and Performance" (2001) and "Electronic Interference" (2002).

complexities of graphic design, their comments elsewhere imply that the refusal of a multitude of available design options is a deliberate choice, itself invoking a carefully selected set of cultural referents. As my first chapter demonstrated, even basic word processing software has enabled experimentation with fonts and colours since the late 1980s, and attributing colour or changing a font using Flash is considerably simpler than constructing the carefully-timed and synchronised animations which are YHCHI's signature style. Although a posture of amateur incapacity may suit YHCHI's insouciant persona in interviews, Chang's statement demonstrates that there is much more to YHCHI's aesthetic decisions than a disinclination to engage with the software's native capabilities. If YHCHI's refusal of fonts and multiple colors is an aesthetic choice rather than due to lack of skill with the software they use, their reference to "millions of colors" is also an oblique comment on then-contemporary trends in Flash and HTML design for the Web. Alan Liu argues that "[c]ool designs on the Web" copy "the 'look' and 'feel' of modernist graphic design" (207) and designers of the late 1990s bemoaned the explosion of fonts, colours and experimental layouts on amateur web sites, often the enthusiastic experimentation of non-experts with little or no understanding of, or interest in, established design precepts. YHCHI's determination to "strip away" embellishments common to the experience of viewing text online is a decision which references the abhorrence of graphic clutter in discussions of advertising as well as graphic design.⁶⁷ Marjorie Perloff observes in *Radical Artifice* that [i]n the billboard culture of the late twentieth century, the 'successful' text is one that combines high-speed communication with maximum information" (Perloff, *Radical Artifice* 94), and YHCHI's combination of high-impact typography with declarative language invites comparison with a number of artworks which have sought to augment the immediacy of their visual effect by referencing or adopting the visual tactics of signs and newspapers.

Reminiscent of the styling of official warning signs, newspaper headlines and commercial advertising boards of the early twentieth century, the

⁶⁷ Liu also treats the complexity of the online environment in terms which echo YHCHI's sense of sensory overload. "Strip away all the colorful metaphors of information seas, webs, highways, portals, windows, and the rest (like picture calendars tacked to the wall), and what comes to view is only the stark cubicle of the knowledge worker" (Liu, *Laws of Cool* 76).

disingenuously artless appearance of bold, monochrome capitalised text is a vital factor in YHCHI’s pieces’ visual impact. Though Pressman does not mention the Vorticist magazine *Blast* in her study of “digital modernisms,” the resonances between YHCHI and the “manifesto” stylings of *Blast* are particularly striking. In fact, *Blast*’s use of a “characteristically bold typeface” (Wragg 25) and tauntingly assertive tone make it a far more compelling precedent for YHCHI’s oeuvre than the classical facade of Pound’s *Cantos*. “There was a certain barbaric aggressiveness,” Wees observes, “not only in the sheer bulk of the magazine, but also in Lewis’s manipulation of the attention-grabbing devices of newspaper headlines and advertising posters” (Wees 165). In the opening “manifesto” and throughout *Blast 1*, readers are accosted in a fashion which anticipates YHCHI’s provocative, aggressively confessional style. “CURSE those who will hang over this Manifesto with SILLY CANINES exposed,” the Blast/Bless section pronounces, before drawing its reader into an involuntary conspiracy: “WE WHISPER IN YOUR EAR A GREAT SECRET” (*Blast* 6). YHCHI deploy a similar mix of conspiratorial tone with blithe assumption of the reader’s attentiveness. “CAN I CONFIDE IN YOU?”, asks the narrator of *SAMSUNG* (Fig.2). As in the *Blast* Manifesto, the audience is both essential and unresponsive, their acquiescence immediately assumed: “THANKS,” the narrator immediately continues, before launching into an extensive and solipsistic monologue about technological obsession.

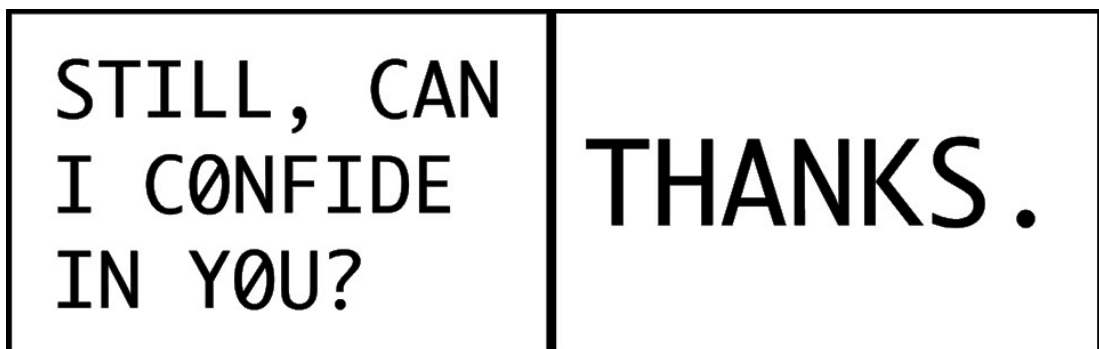


Fig.2

As I have already suggested, the most significant aspect of YHCHI’s formal design is their use of text-in-motion, and this is similarly based in techniques developed in the context of commercial advertising. Roberts et al find

parallels between YHCHI's use of successive frames and avant-garde film, finding that YHCHI's "rapidly flashing text" evokes "the 'flicker' films of the 1960s and 70s" (Roberts et al, fn. n.pag.), and suggesting a comparison with Fluxus artist Paul Sharits's 1966 film *Word Movie*, whose "single words appear successively at a rate of one frame per word, while each word shares a letter with that which precedes it, providing an impression of continuity in an otherwise random reading exercise" (Ibid.). Although the visual similarities with *Word Movie* – monochrome text, words appearing in quick succession – are convincing, YHCHI's combination of high-impact lettering with onscreen motion draws more extensively on innovative tricks and styles first evident in commercial television and film. In particular, they deploy techniques developed by designer Pablo Ferro, who had "pioneered the use of type in motion on the TV screen" in the late 1950s, developing a "kinetic quick-cut method of editing whereby static images... were infused with speed, motion, and sound" (Heller n.pag.).

The most famous early example of Ferro's innovative techniques is the trailer for Stanley Kubrick's *Dr Strangelove*, whose similarity with YHCHI is evident in this account:

The trailer opens with a visual assault — a quick-fire montage of titles, excerpted footage and sound effects. In the first forty seconds over a hundred edits flash past, cutting between stark white titles on a black screen and quarter-second bursts of Peter Sellers, George C. Scott and Stanley Kubrick. Existing television conventions can be seen in the use of close images, the screen-filling lettering, and the rapid montage. (Johnston 86)

Unlike YHCHI's entirely text-based work, Ferro's trailer also includes images and dialogue spliced between screens of text. Nevertheless, the aesthetic convergence between the *Strangelove* trailer and YHCHI's use of words flashing up onscreen in pieces such as *DAKOTA* is striking: the quick-fire pace, impression of "visual assault," "screen-filling lettering" and use of individual words appearing onscreen in quick succession. The precedent of 1960s movie trailers as an influence for YHCHI's style extends beyond this example; post-*Strangelove*, the 1965 UK trailer for the Bond film *Thunderball* also features a range of textual effects

frequently deployed by YHCHI: letters filling the screen, lines accumulating in steps across the page, and words which expand to spill off the edge of the screen. The cinematic aspect of YHCHI's work is clearly signposted by their use of a movie countdown at the start of each piece, while the importance of 1960s televisual conventions for the development of text in motion indicates their works' gesture towards advertising techniques: bold, fast, high-impact presentation of segments of text calculated to grab the reader's attention.

YHCHI's stated determination to "use the Internet to the maximum" (YHCHI, "Interview with Hyun-Joo Yoo" n.pag.) prompts them to exploit its multimedia potential, and although YHCHI's art is, as Pressman notes, formally "difficult," they also appear determined to provoke their audience to response, displaying a knowing use of tactics drawn from commercial advertising. This aspect of their approach is comparable to the artworks of Jenny Holzer and Barbara Kruger, both of whom deploy high-impact typography in order to explore and exploit the dogmatic tone of recognisable forms of social and commercial instruction. YHCHI's adoption of the Web as a space for free publication to a huge potential audience echoes Holzer's early use of flyposting and cheap printed media, favouring "immediate communication and broad distribution," which for Holzer involves "blunt, pungently expressed thoughts conveyed by cheap, ubiquitous means" (Smith, "Jenny Holzer" n.pag.). The "precise, declarative form" (Poggi 198) of Holzer's *Truisms* and *Inflammatory Essays* anticipate the tone of YHCHI's work, while Holzer's move from static posters to experiment with LED signs introduced the element of textual pace and movement so important to YHCHI. Poggi notes that the signs "put the *Truisms* into motion, mimicking the speed, evanescence, and flashiness of advertising or the news announcement," and adds that "no sooner is one Truism read than it is followed by another, and another" (Poggi 198). As with Pablo Ferro's use of moving typography, the "speed" and "evanescence" of Holzer's artworks not only offers a distinctive visual precedent for YHCHI's flashing text, but also shares their intimation of advertising's "flashiness." Like Holzer, whose works frequently take the form of didactic aphorisms to wheedle and instruct their reader, YHCHI use a declarative format to capture an audience's attention and address them

directly. “ABUSE OF POWER COMES AS NO SURPRISE,” reads one of many famous declarations among the *Truisms*, and YHCHI share Holzer’s awareness of the ways in which a certain tone and language associated with positions of authority can be powerfully mixed with messages of intimacy and the anticipations of thwarted personal emotions.

The affinity with *Blast*, Holzer and artworks concerned with speed, evanescence and corporate power raises the possibility that YHCHI’s true influences lie not with the classical scaffold of the *Cantos* but in the declarations about speed and technology associated with Vorticism and Futurism. YHCHI’s texts-in-motion offer a literalisation of modernist invocations of “dynamism” and “energy”, and *display* a shared fascination with the interrelation of shock, speed and new technologies. Certainly the surging pace of pieces such as *DAKOTA* and *BUST DOWN THE DOORS* recall Pound’s rhetoric of speed in his announcement of the “VORTEX, from which, and through which, and into which, ideas are constantly rushing” (Pound, “Vorticism” 92), or Marinetti’s declaration in the Futurist Manifesto that “the world’s splendour has been enriched by a new beauty: the beauty of speed” (Marinetti n.pag.). Discussing the interrelation of speed and shock in modernist approaches, Enda Duffy compares aesthetic assertions from Pound and others with the advent of the automobile, treated as evidence of “the excessive speed of individual pleasure”:

[C]ars and related technologies turned out to be thoroughly characteristic modernist artefacts: they too delivered defamiliarizing shocks, stunning their users with the shock of the new. Their shocks were, however, directly physical rather than intellectual or aesthetic. [...] The automobile was the promise, through technology, of an experience lived at a new level of intensity. In offering the new sensation of hurtling through space at speed, it gave the car’s driver a striking new level of personal power, both over the most minute manipulation of the new sensation and over its effect on others. (Duffy, *The Speed Handbook* 5)

The technological speed which concerns YHCHI, however, is not the “visceral” and “immediately pleasurable” (Duffy 5) sensation of travelling fast, but the pace and reach of communications permitted – at least in theory – by the advent of

television and the Web. Zygmunt Bauman refers to “time-compressing technology” (Bauman 81), while James Gleick declared in 1999 that “[a] compression of time characterises the life of the century now closing” (Gleick, *Faster* 9). With the global spread of the Web, the time-compression formerly theorised as a consequence of high-speed travel is augmented by the instantaneity of communication online. Paul Virilio asserts in *The Futurism of the Instant* that “[p]ast, present and future contract in the omnipresent instant, just as the expanse of the terrestrial globe does these days in the excessive speed of the constant acceleration of our travels and our telecommunications” (Virilio, *Futurism of the Instant* 71). Describing what he calls “the principle of ‘immediacy’” (Urry 10), John Urry agrees that “contemporary technologies and social practices are based upon accelerated time frames that lie beyond conscious human experience” (Urry 189), since “[c]omputers make decisions in nano-seconds, and [...] information can become instantaneously and simultaneously available more or less anywhere” (Ibid.).⁶⁸

Despite their formal use of speed and shock, YHCHI’s attitude to the impression of “time-compressing technology” (Bauman 81) associated with this new technological immediacy is by no means celebratory. Hal Foster observes that “machinic modernisms made a fetish of technology,” a factor which he suggests “occurred wherever a machinic style was held out as the lure of a technological future to which people were asked, indeed compelled, to accede” (Foster, “The Prosthetic Gods” 7). YHCHI, on the other hand, tend to treat the lure of their own technological future with suspicion, undermining their texts’ formal use of speed with observations of its practical failures and failings in lived environments. *DAKOTA* opens with a narrator exultantly hurtling in a car towards the “badlands” of Sioux falls – but soon halts in the battered environment of a parking lot where the stalled narrator drinks beer and consumes “HAM AND CHEESE SANDWICHES”. When another narrative voice intervenes to announce an immediacy of presence on the other side of the world,

⁶⁸ Others have theorised “immediacy” in terms of “instantaneity” and “simultaneity”. “In cyberspace everything is immediately at hand,” Germain argues, so that “[t]he ‘instantaneity of ubiquity’ prevails” (Germain 86). Mary Chayko agrees that “the modern world has seen electronic technology bring simultaneity to communication across distances and with it another revolution in social connectedness. Now people who are spatially separated can actually share an experience at the same time, which makes the connection even more direct, more vivid, and [...] more resonant” (Chayko 14).

“RIGHT HERE, IN PALPANDONG!”, thereby emphasising the transglobal shifts permitted by online communication, the account again returns quickly to viscerally static bodies, ending with a frenetic vision of “YOU” (reader, narrator, author, subject) consuming a bowl of noodles. In YHCHI’s works, imagery of the speed and instantaneity of modern machinic travel, and the virtual immediacy promised by the Web, is consistently undercut by such returns to bodies in semi-stasis, eating, drinking, typing, becoming bored.

YHCHI’s exploration of speed and immediacy is countered by an awareness of its failures and difficulties, not only arising from inexpert use of technology and recalcitrant human bodies, but also from fundamental failings of software and hardware. It’s important that YHCHI’s early works were formed and published several years before the phenomenon of YouTube, in a time when publishing and encountering artworks online often involved navigating a gap between the much-promised immediacy of electronic communication and a lived reality of broken connections and long, slow file transfers. Nick Bilton reminisces about the potential slowness of new technologies in *I Live in the Future*, comparing the first phase of the Web” to “the early days of Apples, Dells, and IBM PCs,” when “the computer took several minutes just to load:”

Anyone who remembers the early days of the Web went through a similar experience... just connecting to the Internet took several minutes. There were passwords, strange fax machine-like noises and a few clicks of the mouse, and then interminable delays as the “World Wide Wait” slowly dripped into view. People kept themselves occupied by picking up a book or a magazine that sat close by, playing solitaire on the computer, or simply staring off into space, letting their minds wander. (Bilton 199)

Bilton’s description of the punningly titled “World Wide Wait” deliberately contrasts this experience with the emphasis on ease and efficiency evident in much of the rhetoric around the Web. In place of the “information superhighway,” Bilton offers “interminable delays.” Against the smooth thrill of cyberspace, he recalls “passwords” and “strange fax machine-like noises,” disrupting the process of getting “online”. Bilton’s description reminds the reader

of the other, older technological functions on which this futuristic connection still relied, just as YHCHI mention in an interview that users downloading large files might be worried about the phone bill (YHCHI, “Interview with Thom Swiss” n.pag.). As Bilton indicates, the thrilling promise of “instant access” was frequently absent from everyday encounters with the Web. Even as connection speeds improved in the late nineties, attempts to stream data continued to be accompanied by high levels of user frustration and the screeching of a dial-up modem, and larger downloads often stalled or had to be restarted from scratch after a disconnection.

YHCHI’s poem titled *ARTIST’S STATEMENT NO. 45,730,944: THE PERFECT ARTISTIC WEB SITE* delights in thematising and enacting the frustrations of technological delay, and repeatedly draws attention to the waiting bodies of both narrator and reader. In *ARTIST’S STATEMENT*, whose meandering pace provides a stark counterpoint to the high-impact speed of *DAKOTA*, the creation of a “perfect artistic website” is marred by the “interminable delay” of a slow upload connection. The poem consists of a monologue by a narrator-figure in the midst of uploading “A FAT, / JUICY // FILE OF / WEB ART” to their artistic website. Rather than simply “staring off into space” and allowing the mind to “wander” (Bilton 199), this narrator provides their assumed audience with a running commentary on their thoughts and reactions, inviting them to share in the seemingly-endless state of anticipation incurred by the long wait for a large file transfer. In *ARTIST’S STATEMENT*, the narrator’s boredom while awaiting the completion of this upload is mapped onto the form of the work, with segments of text lingering onscreen considerably longer than necessary to read them, and identical or similar phrases repeated on consecutive screens; the text gleefully announces “WAITING / FOR / REPLY...” – then in the next frame, “STILL / WAITING...”. The slow transitions combine with repeated phrases to enact the narrator’s frustrated anticipation in the reader’s assumed response. “YES”, the narrator announces, “UPLOAD / FOR A LONG / TIME” – the text is repeated, again delaying the pace of revelation – “FOR A LONG / LONG TIME” – before triumphantly offering a payoff mired in hyperbolic cliché: “FOR THE / TIME IT / TAKES /

TO WATCH / DAY // TURN INTO / NIGHT”.

Despite being cast as a self-deprecating contemplation of the narrator’s own encounter with a painfully slow technological process, the portrayals of delay and boredom in *ARTIST’S STATEMENT* should not be read as self-reflexive statements on YHCHI’s own creative project. Instead, they illustrate YHCHI’s acerbic view of the vagaries and difficulties of achieving aesthetic impact online. The unwieldy size of the “fat, juicy file” uploaded by YHCHI’s first-person narrator in *ARTIST’S STATEMENT* is precisely the opposite of YHCHI’s own practice, who describe a conscious effort to ensure their files’ small size makes them instantly playable on any internet connection. YHCHI are scathing about others’ tendency to use impractical file sizes, which hamper accessibility for the vast proportion of their contemporary online audience:

In the beginning of Net art, we were struck by how ineffective Net artists were in communicating information — words, images, sound. This was in the mid-90s, when few people had broadband. Typically, Net art was an image with some words that took an eternity to download and appear in the browser. Music? Forget it, it was too heavy. And when it came to streaming media such as Flash and QuickTime, the image became tiny. By eliminating the image and just using text, plus the small miracle of mp3, we were able to create Flash pieces of from one minute to 25 minutes that fill up the browser and start playing after just a few seconds via a 56K modem. (YHCHI, “Interview with Hyun-Joo Yoo” n.pag.)⁶⁹

YHCHI’s reference to the “eternity” required to access others’ creative work underscores their own determination to produce pieces which “use the Internet to the maximum.” For YHCHI, this means achieving a combination of speed and accessibility, capturing the reader’s attention swiftly, and ensuring that it is not disrupted by technological error or delay. The level of acceleration required for this is revealed in the triumphant conclusion that their own pieces play “after just a few seconds.” In YHCHI’s analysis, making art “as entertaining as TV” (YHCHI, “Interview with Hyun-Joo Yoo” n.pag.) involves minimising the effects

⁶⁹ YHCHI are not alone in their diagnosis of creative projects which fail to take the limitations of the Web into account. For example, Anja Rau’s uncharitable analysis of Caitlin Fisher’s hypertext novella, *These Waves of Girls*, dismisses the sloppy, mismanaged and essentially malfunctioning technical capacities of this much-acclaimed piece (In *Reading Hypertext*, Bernstein, ed).

of a “World Wide Wait.” YHCHI’s minimalist aesthetic is therefore a direct response to the difficulties of transferring large files online at the time they first began collaborating.

YHCHI’s success in overcoming the limitations of the Web as an environment for multimedia publication is considered in critic and curator Mark Tribe’s account of his first encounter with a YHCHI work:

One night in the spring of 2000... I opened my laptop and found a mysterious email in my in box [sic]. I clicked on a link, a browser window opened, and gigantic black numbers flashed on screen, counting down from ten, as an explosive percussion track began to play. [...] I was stunned—never before had I experienced such a dynamic, emotionally powerful work of art on a computer screen, let alone one that had reached me in a hotel room via a 56.6K modem. (Tribe n.pag.)

Reminiscent of Pressman’s accounts of “spellbound” readers, the adjectives in Tribe’s account are carefully chosen to capture the powerful sensory impact of his first viewing, with the “gigantic” numbers and “explosive” soundtrack conveying scale and affect. His description of the work’s effect on his own emotions is emphatic; it is both “dynamic” and “emotionally powerful” (Ibid). What interests me most in this account, however, is Tribe’s expression of surprise at the work’s capacity to affect him in this way. To Tribe’s amazement, YHCHI’s art prompts a profound response despite its transmission into an otherwise bland and unpromising space, in “a hotel room,” playing in his internet browser and conveyed by an infamously inefficient technology, the 56.6k modem.

Tribe’s surprise at the artwork’s ability to transcend the seemingly prosaic aspects of its setting hints at an aspect of interaction with computing technology and the Web which is crucial to YHCHI’s depiction, and constitutes an important contrast to their use of high-speed, eye-catching visual forms. It introduces and acknowledges the possibility of slowness, technological failure, banality and boredom when encountering computing technology. Many of the authors and commentators I have discussed in this thesis approach the computer in terms of Janet Horowitz Murray’s idea of the “enchanted object” (Murray 99),

treating it as a gateway to new capacities and possible worlds which is prized or feared on the basis of its innovative capabilities. In Tribe's account, on the other hand, the computer is a tool and communications device, an interface he might expect to use for work, email, or shopping. These uses all rely on the same principles and processes which have been perceived as powerful, mysterious or exotic in the literary works I have discussed in previous chapters. However, familiarity can transform wonder into expectation, and functionalities which might once have seemed incredible begin to appear basic when they have entered into everyday use. At the turn of the millenium, about to check his email from a hotel room, Tribe does not see his computer as an enchanted object achieving something that had been unthinkable a few years previously. It is a device which is working more slowly than he'd like, because he is using a dial-up connection and files can take over half an hour to load.

Tribe's reference to the 56.6k modem hints at the more prosaic aspects of engaging with the Web which affected computer users in the late nineties. Caught in precisely the kind of technologically-induced limbo described by Bilton and anticipated by Tribe, the narrator of *ARTIST'S STATEMENT* waits for the Web to perform its promised functions while wryly musing "ISN'T THIS / THE PERFECT / MOMENT // TO REFLECT / ON // LIFE / AND / DEATH. // AND EVEN / MORE / IMPORTANT / THINGS, LIKE // COULD I / BE DOING // SOMETHING / ELSE BESIDES / THIS?". The lurking possibility of boredom and mediocrity recurs in YHCHI's paratextual commentaries, as when they explain that their collaborative practice is prompted by a "desire to see if by adding up two mediocre talents we could come up with something greater than their sum" (YHCHI, "Interview with Petra Heck" n.pag), or respond to an interviewer's questions about critical reactions to works published online by cheerfully offering the possibility that "of course, Web writing might not be very good" (YHCHI, "Interview with Thom Swiss" n.pag.). Such knowing self-deflation is an enduring tendency in YHCHI's works, which consistently contemplate the intersection of art and the Web while simultaneously challenging their own claims to be considered "art". It is also related to their consistent self-portrait as enthusiastic amateurs in their use of software. Despite their evident

pride at successfully circumventing the problem of slow file transfers, YHCHI have been quick to claim their own status as non-experts in the use of Flash software. In a 2001 interview, asked whether they'd ever been tempted to "incorporate a 'big juicy file' of images into a new piece," they replied "[y]es, we just don't know how to do it" (YHCHI, "Interview with Rick Silva" n.pag.). When another interviewer queried YHCHI's decision not to deploy interactive features in their work, they again claimed limited understanding of the software with a response which could be either curt or playful: "Because we don't know how" (YHCHI, "Interview with Hyun-Joo Yoo" n.pag.). These claims to inexpertise echo the assertion that their work's minimalist aesthetic results from their being overwhelmed by the possibilities of "hundreds of fonts, millions of colors" (YHCHI, "Interview with Thom Swiss" n.pag.).

Despite their claims to inexpertise in certain interviews, YHCHI also justify their refusal of interactivity or responsiveness with vehement assertions of intent. In a 2005 interview, YHCHI declared that "[w]e would like our own work to exert a dictatorial stranglehold on the reader" (YHCHI, "Interview with Hyun-Joo Yoo" n.pag.). As with their knowing reference to Pound as a modernist precursor, this pledge to exert a "stranglehold" is a direct inversion of the critical language of "freedom" and "plurality of discourses" which celebrated interactive hypertext's "freeing the reader from domination by the author" (Coover, "The End of Books" n.pag.). When she describes interactions with *DAKOTA*, Pressman casts the reader in the stance of a passive observer who "can only sit back and try to absorb the stream of text flashing before her eyes" (Pressman, *Digital Modernisms* 79), an image which is directly opposed to the idea of an engaged digital reader navigating responsive texts. Against the background of a theoretical and creative sweep towards various forms of nominally "interactive" literary and artistic modes in digital production online, YHCHI's decision to replicate the didactic tone and format of works from the conventionally monodirectional media of television, cinema and print-based art is deliberately controversial. Their resistance to the kinds of user-responsive text enabled by Web-based software and scripting indicates a refusal to comply with contemporary digital trends, effectively shunning the idea of the Web as a newly inclusive medium.

YHCHI's refusal of interactivity is further emphasised by the fact that their software of choice is one of the most popular platforms for interactive or responsive works.⁷⁰ In 2006 critic and curator Mark Tribe noted that YHCHI's use of Flash "barely scratch[es] the surface of the application's capabilities" (Tribe n.pag.), adding that their pointed denial of interactivity made YHCHI a problematic choice for the 2001 Webby award they received in the art category. Some jury members, Tribe recounts, "argued that selecting Young-Hae Chang Heavy Industries would send the wrong message to the art world," because "their work does not exemplify such distinctive features of the net art medium as interactivity or algorithmic computation" (Tribe n.pag.). Discussing YHCHI's flouting of the interactive properties of Flash, Pressman agrees that they "use this vector-based software *against its will*" ("Strategy of Digital Modernism" 306, my emphasis). Her unusual personification conjures the image of a Flash file furious to discover that it has been used to present a continuous stream of speeding monochrome text, rather than becoming a scripted playground for the user's mouse. Pressman finds that YHCHI's refusal of interactivity constitutes "a fashioned act of resistance to counter *enthusiasm for the latest and newest* through a retro-aesthetic" (306, my emphasis). However, a claim that YHCHI's "fashioned act of resistance" is exemplary of a nostalgic "retro-aesthetic" (306) overlooks the ideological functions underlying YHCHI's formal choices. YHCHI's reassertion of a dogmatically author-driven production and reception of narrative is not borne from nostalgia, but rather a determination to reveal aspects of contemporary interactions with technology which are not included in idealised notions of "plurality of discourse" and empowered readers. YHCHI's obstinately linear texts set out to counter the idea of digital forms as works whose effect is "freeing the reader from domination by the author" (Coover n.pag.), thereby dismissing the illusion of freedom implied by the kind of ebullient rhetoric around polyvocality and flexibility hailed by Coover, Landow and Bolter.⁷¹

⁷⁰ The overwhelming popularity of Flash software, and the high proportion of interactive texts in admired digital works, is illustrated by the Electronic Literature Organisation's 2006 archive of digital works published between 1995 and 2005. Nearly half are saved as Flash movies, while only eight of the sixty-two pieces included in "Volume One" are classified as "non-interactive". This fraction shrinks to four out of sixty-two texts featured in 2011's "Volume Two".

⁷¹ Gaylard supports YHCHI's sceptical perspective, arguing that "the standard spin given to digital virtuality in our era, and not just by advertising copywriters, is that of naive optimism [...] While one can certainly endorse the call for more polyglot, less rigidly hierarchical modes of practice, we should be skeptical about the role of

YHCHI argue that freedom from “domination” can only be achieved through outright rejection of the text and its content, explaining in an interview that “[t]he spectator is far from powerless” since “[s]he is still the one who decides whether or not she will watch the piece, or having clicked on it, whether she’ll click away” (YHCHI, “Interview with Hyun-Joo Yoo” n.pag.). This dogmatic refusal to require or encourage the reader’s input beyond the binaries of acceptance or rejection summarily dismisses late-nineties rhetoric around the power of interactivity as a significant innovation in digital art and literature. The reference to the “power” of “clicking away” is particularly crucial, since it emphasises a complex power dynamic between text and reader which is an essential aspect of their accelerated – or decelerated – moving texts. “YOU CAN / TURN AWAY // FROM THE / INTERNET;” the narrator of *ARTIST’S STATEMENT* declares, “YOU CAN / QUIT, / SHUT DOWN, // OR BE / DISCON- / NECTED, // AND SEE / IT FOR THE / BETTER.” A later piece relates this “turn away” to the work itself. *WARNING: READING THIS MAY OR MAY NOT CHANGE YOUR LIFE*, commissioned for television by the UK’s channel 4 and broadcast in November 2012, challenges the reader directly. “SAY, WHAT’S THE POINT OF READING THIS?” is its opening gambit, before daring its reader to reject it – to “ZAP TO A DIFFERENT CHANNEL”. “WHAT IS THIS ANYWAY?” it asks. “COULD IT BE... ART?”, before taunting the assumed reader with the possibility (or impossibility) of a literal version of their transformation from reader to author. What if, the poem asks, it could be you “WRITING THIS TEXT,” before openly taunting the reader’s incapacity to respond.

YHCHI’s approach to the power to “click away” is fundamentally opposed to critical stances on “hyperfiction” and other supposedly interactive art forms, which conflate the reader’s opportunity to interact with or influence a text or artwork with an increased power. In hypertext aficionados’ conception of interactive narrative, the link offers a click “onwards” rather than “away,” and the willingness to keep clicking is evidence of readerly engagement. Young-Hae

hypertext in advancing that project. [...] if we look past the utopian hype we can discern a tendency toward the healthy survival, even flourishing, of realist tropes and mores within digital virtuality, a tendency with a number of disturbing connotations for ‘postcolonial cultural experience.’” (Gaylard, “Postmodern Archaic” n.pag.)

Chang has expanded on YHCHI's dismissal of this idea, announcing her "special dislike for interactivity":

To me it's a paltry, laughable thing, like getting a kick out of pulling the trigger of a gun: click: bang. I don't get it. When I click on interactive art, I get the feeling I'm the rat in the Skinner box, except there's only the miserable reward, not the shock. Art isn't reward, it's shock, or something approaching it, something I would call beauty. (Chang, "Artists Statement" n.pag.)

Chang's stance explodes conventional rhetoric around "hyperfiction" and "responsive" artworks. Rather than join critical consensus in celebrating responsive texts as a means of allowing the audience to adopt a newly participatory role, she reduces such possibilities to the realm of "paltry" gimmick, using the simile of the gun-trigger to express her dissatisfaction with the idea of an all-powerful and instantly effective "click". YHCHI's insistence on the immobilised viewer absorbing onscreen motion recalls Deleuze's assertion that "[i]t is only when movement becomes automatic that the artistic essence of the image is realised: producing a shock to thought, communicating vibrations to the cortex, touching the nervous and cerebral system directly" (Deleuze, *Cinema II* 161). The affective "shock" which Chang considers fundamental to "Art" is diluted or removed when an audience is given "only the miserable reward" – in other words, invited into a realm devoid of risk, where every option is equally valid and no choice is permanent.

The analogy of the "rat in the Skinner box" refers to a device developed to conduct experiments in animal behaviour, where a small animal is locked into an enclosed space before being presented with a variety of different options either comprising a "reward," usually provision of food or water, or a "shock," originally in the form of electrocution. Chang's imagery of the Skinner box inverts the understanding of web- and computer- based creative projects as a realm in which the user/reader/audience is invited to consider themselves an integral and productive factor in creative experimentation. Instead, the reader of interactive fiction is figuratively located in a controlled and subtly controlling situation, where the mouse, trackpad, keyboard or touchscreen function as a way of

manifesting emotional responses through a physical action akin to the rat pulling a certain lever to produce food. The statement interprets interactive works as providing a mere semblance of choice (click *here* or *here*, or in the case of the rat, pull *this* lever or *that* one). For Chang, this illusory choice is not flawed because of the options it offers, but rather because of a lack of emotional response induced by their consequences.

In an artists' book designed to accompany a YHCHI exhibition at University of Michigan Museum of Modern Art (UMMA), the curator Natsu Oyobe offers an interpretation of YHCHI's "denial of interactivity" (Oyobe 23) which combines Chang's imagery of the Skinner box with the aspects of commercial advertising and didactic instruction referenced by YHCHI's distinctive style and format. Oyobe compares the experience of "the viewer" of YHCHI's work with that of "the consumer," arguing that the sensory onslaught of YHCHI's unstoppable and uncontrollable texts echo the workings of big corporations who "flood the market" with products and services (Fig.3). Oyobe's observation aligns the presumed response of YHCHI's reader/spectator with that of an individual within advanced consumer culture, subject to a slew of "products and services" which demand input in similarly unequivocal terms to YHCHI's domineering text: buy or reject, take it now or miss the chance. Her characterisation of contemporary environment echoes Alfred Borgmann's impression of a "floodgate of information" opened up by engagement with new media:

[T]he world abounds with information. You wake up to the news on the radio, read the paper for breakfast, are immersed in signs as you make your way to the office, sit down to fire up your computer—that really opens the floodgate of information—return home, turn on the television set and let waves of information wash over you until you go to bed. Especially in the form of advertising, information, as Brent Staples has remarked, "is rapidly expanding to fill every salable space – which is to say, every space that's empty." (Borgmann, *Holding onto Reality* 3)

In light of these accounts, YHCHI's dogmatic insistence on an uninterrupted narrative might, as Oyobe suggests, echo or replicate the situation of "the

consumer” faced with an inescapable “flood” of corporate products. Just as the reader is invited to engage with a technologised form which threatens to become as incomprehensible as it is compelling, so the subjects described in YHCHI’s poems often find themselves at the mercy of overwhelming circumstances. In both cases, technological media are foregrounded as an environment in which an individual is affected by forces they cannot completely control.

THE VIEWER OF YHCHI’S WORK IS
DEPRIVED OF
TWO-WAY COMMUNICATION,
JUST AS THE CONSUMER IS WITH ANY OF THE BIG CORPORATIONS THAT
FLOOD THE MARKET
WITH THEIR PRODUCTS AND SERVICES.

Fig.3 Oyobe 32

Oyobe’s interpretation suggests that corporate subjectivity is a commonly shared contemporary experience. “How many of us have experienced frustration,” she asks, “in the face of the impenetrability of the smooth, impersonal facade of large corporations?” (Fig.4). Recalling Patricia Clough’s understanding of bodies treated as “information,” Oyobe’s comments combine two key features of YHCHI’s work: their use of an innovative formal medium to limit the responsive options available to a reader, and their preoccupation with corporate and national systems of control, portrayed through narratives which emphasise the emotional responses of individual characters who are portrayed as marginalised, threatened or oppressed by powers outside their direct control. Evoking Deleuze and Guattari’s notion of “smooth” space in *Thousand Plateaus*, Oyobe’s reference to the “smooth, impersonal facade” of corporations casts commercial interests as all-

powerful entities, simultaneously incomprehensible and inaccessible to the individual consumer. Yet the perceived inescapability of the deluge of marketing flooding the consumer marks a significant shift in relations, whereby the merging of the consumer's environment with that of the "big corporations" appears to threaten the individual's capacity to remain a coherent, separate being uninflected by the reach of commercial interests.

HOW MANY OF US HAVE EXPERIENCED
FRUSTRATION
IN THE FACE OF THE IMPENETRABILITY OF THE
SMOOTH,
IMPERSONAL FACADE OF LARGE CORPORATIONS?

Fig.4 Oyobe 32

Oyobe's characterisation of "inhuman" faces of corporations which "flood" the market offers an interesting intersection with Deleuze's concept of "societies of control," where the facets of "disciplinary society" conceived by Foucault have been replaced by "ultrarapid forms of free-floating control" of the kind theorised by Paul Virilio.⁷² In fact, Oyobe's impression of the "impersonal facade" of large corporations – separated off from an inundated individual – does not quite chime with Deleuze's conception of the new functioning of institutions and corporations in a "control society". In place of faceless monoliths, Deleuze argues that in a society of control "the corporation is a spirit, a gas" (Deleuze, "Postscript" 4). In this context, marketing becomes a credo and corporations and

⁷² Whereas Deleuze's concept of the societies of control offers a relatively neutral reading, Virilio's analysis of this perceived global evanescence is emphatically negative. In *Information Bomb*, for example, Virilio describes "a virtual reality that monopolises the greater part of the economic activity of the nations and, conversely, destroys cultures which are precisely situated in the space of the physics of the globe" (Virilio, *Information Bomb* 9). Raiford Guins questions Deleuze's invocation of Virilio, arguing that "Virilio's statement in *Speed and Politics* that 'we only need refer to the necessary controls and constraints of the railway, airway or highway infrastructure to see the fatal impulse: the more speed increases, the faster freedom decreases' (141) seems to disallow Deleuze's notion of disciplined freedom" (Guins, *Edited Clean Version* 200).

audiences are intertwined in new ways:

Marketing has become the center or the “soul” of the corporation. We are taught that corporations have a soul, which is the most terrifying news in the world. The operation of markets is now the instrument of social control and forms the impudent breed of our masters... Man is no longer man enclosed, but man in debt. (Deleuze, “Postscript” 6)

The convergence of markets, corporations and government systems with a “mass” of everyday lives anticipates the rise of the Web and the increasing entanglement of personal lives with corporate identities, as described in Jennifer Egan’s *Look at Me*, where corporate profit intersects with a seemingly limitless appetite for sharing and absorbing personal information. This is a concern for YHCHI too, whose works explore a strange intersection of commercial interests with personal desire. “The man of control,” Deleuze suggests, “is undulatory, in orbit, in a continuous network” (Deleuze, “Postscript” 6). YHCHI’s depictions consistently express anxiety at the prospect of living an “undulatory” existence. While their work’s appearance replicates a flood or deluge of information which signifies the contemporary moment, the disembodied voices who speak through their texts frequently find themselves anxious and uncertain, hesitating as they try to comprehend a moment of seeming transition between “disciplinary” and “control” societies.

In navigating the control society, Deleuze argues, “what is important is no longer either a signature or a number, but a code,” where “the numerical language of control is made of codes that mark access to information, or reject it” (Deleuze, “Postscript” 5). This account feeds into a late-nineties rhetoric of “friction-free capitalism,” a term coined by Bill Gates to describe his vision of the new possibilities for international commerce facilitated by the internet, where traditional striations of governments, nations and corporations give way to a fluid system of exchange. In 1995’s *The Road Ahead*, Bill Gates outlined his vision for a personal world transformed by computing technology and online communications, prophesying a “global information market” which “will combine all the various ways human goods, services and ideas are exchanged” (Gates, *The Road Ahead* 6-7). In this all-pervasive market, Gates predicts, “your

workplace and your idea of what it means to be ‘educated’ will be transformed, perhaps almost beyond recognition [...] Your identity, of who you are and where you belong, may open up considerably. In short, just about everything will be done differently” (Ibid.). Intertwining personal choice with market forces, Gates’s rhetoric echoes Deleuze’s conception of societies where control is gaseous and all-pervasive, while also unwittingly anticipating the concerns with “corporate fantasies” which YHCHI explore. Whereas Gates envisages a joyous exchange in an environment where “everything will be done differently,” YHCHI depict individuals struggling to find their place amidst a supposedly “opened” world in which they find that many avenues are nevertheless closed to them. Thus the narrator of *SAMSUNG MEANS TO COME*, pursuing information about an electronic sign she has seen above a building, naively believes that the answer can be found at the gates of the corporation. Having been summarily dismissed by a security guard, she contacts Samsung’s “CONSUMER INFORMATION” but receives no response, despite her reminder that they might take advantage of a plethora of communicative options – “BY LETTER, / E-MAIL, // FAX OR TELEPHONE”. Ignored, the narrator retreats into silent obsession, reconfiguring the “electronics giant” as a godlike figure in a fantasy of direct physical encounter with this embodied corporation.

In “Red Alert!,” Herman and Sloop find that advocacy of the “smooth” processes proffered by rhetoric around the Web in the 1990s can be dangerously misleading. Herman and Sloop express their concern that “within the various utopian/dystopian views of cyberspace, industry slides free as merely the vehicle to the disembodied perils and promises of the Web” (Herman & Sloop, “Red Alert!” 96):

The real “red alert” about cyberspace is not that we fall prey to utopian dreams of bodily transcendence and virtual selfhood, but that such dreams become indistinguishable from corporate fantasies of what Bill Gates calls the “friction-free capitalism” of the twenty-first century. (Herman & Sloop, “Red Alert!” 86)

Herman and Sloop’s conviction that “the critical project must be one of making capital visible, bringing noise back to the equation of a friction-free consumer

utopia” (Ibid) is tantamount to a definition of the project pursued by YHCHI, where the “disembodied perils and promises of the Web” are constantly foregrounded by portraits of individuals whose bodily sensations and desires intersect in complex ways with corporate and technologised environments. Although YHCHI’s narratives appear as pulsing letters on the reader’s electronic screen, they are perpetually filled with references to living bodies, endeavouring to “make visible that which slides away imperceptibly through the utopian discourse of cyberspace” (Herman & Sloop, “Red Alert!” 96). The intertwining of dreams of transcendence and “corporate fantasies” is present in YHCHI’s portrayal of a complex alternation between individual subjects and the deceptively “smooth” commercialised worlds they seek to navigate.

Discussing technocapitalism and welfare, Douglas Kellner acknowledges that “the new technology might exacerbate existing inequalities in the current class, gender, race, and regional configurations of power and give the major corporate forces powerful new tools to advance their interests” (Kellner, “Technologies, Welfare State, and Prospects for Democratization” 253). Kellner argues that “it is up to the people, to us, to devise strategies to use the new technologies to promote democratisation and progressive social change” (Ibid.). In *SAMSUNG* and *SAMSUNG MEANS TO COME*, YHCHI counter the kind of hope for individual agency proffered by Kellner, presenting individuals who confess a thrilled yet powerless confusion at the pervasive role of “corporate forces” in their own lives. These works explore a fundamental disjunction between reactive, affected bodies and a corporate/utopian discourse of “friction-free” commerce and smooth online spaces. The entangling of human bodies and desires with technologised environments and commercial language finds expression in the confessional, conspiratorial tone of *SAMSUNG MEANS TO COME*, which opens with the narrator’s refusal to concede to the judgement of an imagined audience: “AM I SORRY? // SHOULD I BE? // I’M NOT.” As in the demand for an audience in *SAMSUNG* cited earlier in this chapter, YHCHI’s text performs the assumption that there will be somebody “on the other side of the screen,” and that this figure of the unknown reader will continue to attend to their narrative despite being unable to interact or physically respond. Inundated

with information from their heavily technologised surroundings, the narrator-figures of *SAMSUNG* and *SAMSUNG MEANS TO COME* seek to enforce a comparable state on their imagined reader, a factor which is further complicated by a perpetual slippage in the use of the second person pronoun. Brian Richardson states that “second person narration is an extremely protean form, and its very essence is to eschew a fixed essence” (Richardson, *Unnatural Voices* 19), and YHCHI take this protean facet to its furthest extreme in narratives which fluctuate between conventional direct address and an extremely unstable second person narrative.⁷³

The solitude of YHCHI’s narrator-figures is reiterated and emphasised by their address to an unnamed “YOU”, and the reader is consistently and aggressively implicated in their perceptions. Thus the narrator-figure in *SAMSUNG* fears the emptiness of an oblivion where nobody responds, announcing an experience of the Web as a gigantic expanse in which “YOU HEAR NOTHING, // NOT EVEN BACKGROUND HISS”. Sardonicly positing the promises of connectivity from electronics giant Samsung as an alternative to this solipsistic oblivion, *SAMSUNG* echoes the hyperbolic claims and sexual imagery of commercial advertising. In a mock-epiphany, the narrator is struck by a revelation that Samsung is “MY LOVE”, “MY HERO”, “MY SAVIOUR”. There can be no end, the narrator reveals, only “SAMSUNG”. Continuing their tendency to incorporate literary references – as in *DAKOTA*’s invocation of Pound – YHCHI note that the line “SAMSUNG, LIGHT OF MY LIFE, FIRE IN MY LOINS, KISS ON MY LIPS,” was the result of “citing from memory the famous Nabokov beginning of ‘Lolita’” (YHCHI, Interview with Hyun-Joo Yoo n.pag.), and *SAMSUNG*’s liberal use of sexual imagery echoes Nabokov’s exploration of the interface of fetish and desire with commercial aspects of mid-twentieth century American popular culture. In *SAMSUNG*’s companion-piece, the sight of an electronic billboard reading

⁷³ YHCHI’s use of second person pronoun alternates between a number of different uses, usually substituting for first-person but often also implicating the reader as subject of the narrative. Richardson defines three different variations on second person address—“standard” (designation of the protagonist as ‘you’), “hypothetical” (employs the style of a guidebook to recount a narrative) and “autotelic” (employs direct address to the reader or narrate) (Richardson, *Unnatural Voices* 19). YHCHI alternate between all of these uses of second person address, occasionally all within the same work.

“SAMSUNG MEANS TO COME” launches the narrator into an obsession which, as in *SAMSUNG*, chooses to take the conventional terminologies of advertising literally, deifying the “electronics giant” as an all-powerful figure whose capabilities combine technological might with sexual allure and physical domination. Here the narrative’s confessional tone is amplified by the liberal use of reverent language, describing the phenomenon of “Samsung” as a conflation of corporation and deity. The billboard’s message, “AS GLORIOUS / AS A VISION / FROM HEAVEN”, is a sight which leaves the narrator “PENSIVE / AT THE / MYSTERIOUS // SAGACITY OF / THE MULTI- / NATIONAL.” Juxtaposing hyperbolic language which conflates sex, religion and “mysterious sagacity,” the poem develops into a paean to miscommunication and misplaced admiration to depict anxieties that are simultaneously sexual, social and technological.

In the second “Scene” of *SAMSUNG MEANS TO COME*, titled “The Dream,” a thematic conjunction of the individual with the corporation emerges in more visceral terms, when the narrator describes an imagined sexual encounter with the embodied “Samsung”. Surprised while standing at the sink in her mother-in-law’s kitchen, the narrator relates her conviction that “Samsung” “GRABBED ME / FROM BEHIND”. The corporation/deity/lothario’s invasion of a private domestic space is emphasised by the confluence of terminology relating to sexual and corporate power with scrupulous attention to domestic detail: interspersed with the language of big business, the narrator observes the pink rubber gloves she is wearing, and relates her inability to draw her eyes away from the dirty dishwater cascading over the edge of the sink. The narrator’s account of Samsung’s assault substitutes corporate overtones for the work’s earlier reverential deification: the encounter is “A / PRODUCT”, “A SERVICE, // WORTHY OF A / HUGE / CONGLOMERATE”. Lexicons of sexual congress, corporate interest and technological impenetrability converge here: Samsung is simultaneously “POWERFUL,” “SELF-SERVING”, “MEGALOMANIACAL,” “CALCULATED” and “INHUMAN”. The reference to “product” and “service”, combined with metaphors of flood and overflow, suggest that this scene is a prompt for Oyobe’s comparison of YHCHI’s refusal of “two-way communication” with “the big corporations that flood the market with their

products and services”. Oyobe finds that “the consumer” experiences the “flood” of products and services as a negative effect, characterised by “frustration in the face of the impenetrability of the smooth, impersonal façade of large corporations”. In *SAMSUNG MEANS TO COME*, however, the narrator quite literally resolves the issue of a corporation’s “impersonal facade” by fantasising an embodied version of that corporation. Having sought this congruence, she declares ecstatically that “I LOVE // POWER, // EGO-/TISM, // MEGALO-/MANIA, // CALCU-/ LATION // THE / INHUMAN, // THE CORPORATE- / NESS.” A fundamental lack of “two-way communication” is imaginatively resolved by the pliant narrator, who solves her own frustration by explicitly inviting domination by a corporate body.

The emphasis on bodies and physical encounters in YHCHI’s work runs counter to an idea of disembodied anonymity online which was still pervasive in the late 1990s. Noting that “[t]he Internet, conflated with cyberspace, was sold as a tool of freedom,” Chun adds that “by enabling anonymous communications, it allegedly freed users from the limitations of their bodies” (Chun, *Control and Freedom 2*).⁷⁴ In *The Futurism of the Instant*, Paul Virilio takes this promise to its logical extreme, suggesting that the lure of the internet might lead individuals to forgo their “concrete environment” entirely:

Addiction to, or compulsive dependence on, the internet and its innumerable search engines is actually an initial response... interactivity is already driving certain of the faithful to quit their concrete environment, to vacate the premises of an organic social vitality, and even to abandon any regular eating, all healthy living, for this full-screen virtual perspective in which the individual [is] literally consumed by his screens (Virilio, *The Futurism of the Instant* 83-84)

⁷⁴ Though rhetoric of anonymity was most prevalent in the early to mid 1990s, the possibility of the Web as an anonymous space continued throughout the 1990s; in 1999 Alfred Borgmann notes that “[t]he Internet particularly [End 3] has given many people the liberty to escape the constraints of their age, gender, and race, of their shyness, plumpness, or homeliness, and to set their glamorous inner selves free and adrift on a World Wide Web” (Borgmann, *Holding onto Reality* 3-4). Sherry Turkle is perhaps the best-known theorist of online anonymity, particularly her 1995 study of “virtual” environments online. Discussing MUDs (Multi User Dungeons), Turkle finds that “MUDs provide worlds for anonymous social interaction in which you can play a role as close to or as far away from your real self as you choose” (Turkle, *Life on the Screen* 183). Like Chun, Lisa Nakamura is more skeptical of this supposed freedom. Quoting David Silver, she suggests that “[w]hen interfaces not only ignore, but rather ‘route around’ issues of race, gender, and sexuality, they ‘code its participants as the digital default: white, male and heterosexual’ (143)” (Nakamura, *Cybertypes* xii)

Such “acceleration of reality,” Virilio finds, would lead to “a diminished world that is not so much ‘contemporary’ with some banal history of modernity as atemporary” (Virilio 84, original emphasis). Virilio expands on this concern in *Information Bomb*, where he blames “access to the information superhighways” for a number of ailments afflicting bodies and minds, including “erratic activity, serious attention deficits and uncontrollable impulsive acts” (Virilio, *Information Bomb* 39). As in *SAMSUNG MEANS TO COME*, the impact of negative interactions with new technologies is expressed through reference to bodily penetration, where Virilio envisages “progress” “violating each bodily orifice... It does not simply *affect* individuals, it *penetrates* them” (Virilio, *Information Bomb* 39, original emphases). In more measured tones, Chun concurs when she argues that “the conception of the user as an empowered agent must be interrogated,” because “vulnerability and a certain loss of control drives communication, drives our using” (Chun 75-6). Both Virilio and Chun acknowledge a factor which is central to YHCHI’s formal and thematic approaches: an impression of how physical and emotional vulnerability can be simultaneously stimulated and assuaged by the online environment.

These concerns about vulnerability in the face of “progress” and technological speed find vivid expression in YHCHI’s depictions of individuals struggling for control against anonymous disciplinary forces. As demonstrated by the accounts of pleasurable submission in *SAMSUNG* and *SAMSUNG MEANS TO COME*, YHCHI eschew simple binaries of victim and oppressor. Whereas Virilio offers a hyperbolic critique of “progress” as source of illness and anxiety, YHCHI carefully enumerate the potential thrills and pleasures of becoming entangled with new technologies, offering narrators whose vulnerabilities are often exposed in their excessive enthusiasm. YHCHI are also adept at enforcing a switch of perspective, offering slippery narratives which evade simplistic interpretations of a dominant party or locus of power. In *BUST DOWN THE DOORS*, the opening narrative appears to be a simple interplay between victim and oppressor: “THEY BUST / OPEN // THE / DOOR // WHILE YOU / SLEEP, // RUSH / INTO // YOUR / HOME, // DRAG / YOU // OUT OF / BED // PUSH / YOU // IN YOUR / UNDERWEAR // OUT / INTO

THE / STREET” (YHCHI, *BUST DOWN THE DOORS*). However the text recycles itself with an increasingly perplexing switch of narrative subject: YOU become the oppressor, THEY the victim. Eventually, the final iteration offers a frantic melding of viewpoints. After 14 minutes, “THEY BUST OPEN // THE DOOR // WHILE WE SLEEP // RUSH INTO // HER HOME // ENTER MY BEDROOM // DRAG THEM // OUT OF BED // PUSH HIM // IN YOUR UNDERWEAR // OUT INTO THE STREET”. Complicity becomes complex, and physical violence is transformed into the strange bodily intimacy of “I, // IN BARE FEET // HANDS TIED // BEHIND YOUR BACK,” as the victim is transferred to a spot where “WE WILL FORCE HIM // TO MY KNEES // AND PUT A BULLET // IN THEIR HEADS”.

Young-Hae Chang’s assertion that YHCHI find beauty in a combination of shock and boredom seems particularly pertinent in the case of *BUST DOWN THE DOORS*, which is both tremendously repetitive and genuinely disorienting in its headlong rush to a multitude of subjects amid the frantic slippage of personal pronouns. Like the ending of *DAKOTA*, *BUST DOWN THE DOORS* plays with alternation between attention and demand, boredom and shock. In her study of Fluxus experimentations with video art in the mid-twentieth century, Dorothée Brill similarly observes that “Fluxus plays on art’s capacity to increase either the difficulty (shock) or the length (boredom) of perception” (148):

Fluxus attempts to communicate a different take on the world by using shock and boredom as means to irritate spectators’ or listeners’ receptive attitude and to estrange recipients from their very expectations. (154)

Brill’s account of Fluxus experimentations in repetition and “super boredom” resonates with YHCHI’s deliberate challenge to readerly perceptions, and the alternation between endurance and shock involved in following the recycling phrases of *BUST DOWN THE DOORS* or the repetitive screens of “WAITING...” and “STILL / WAITING” in YHCHI’s *ARTIST’S STATEMENT*. Whereas *BUST DOWN THE DOORS* experiments with repetition, *ARTIST’S STATEMENT* numbs its reader with excessive detail as the narrator muses on each phase of an “everyday” encounter with technology. Sianne Ngai suggests that

“[t]he sudden excitation of ‘shock,’ and the desensitization we associate with ‘boredom,’ though diametrically opposed and seemingly mutually exclusive, are both responses that confront us with the limitations of our capacity for responding in general” (Ngai, “Stuplimity: Shock and Boredom” n.pag.). *ARTIST’S STATEMENT* exploits this nexus of responses by endeavouring to find and exceed the viewer’s attention span. Born out the “tedium of the everyday,” the kind of technological frustration performed and invited by YHCHI’s work “signals a kind of brute return to a world where bodies and artefacts share in a mute and mundane [...] materiality” (Shinkle, “Videogames and the Digital Sublime” 104). The reader’s anticipated frustration is an invitation to contemplate their surrounding environment, to shift focus away from the performed delay still unfolding on the screen.

YHCHI’s enthusiasm for exploring the potential for glitches, boredom and frustration when encountering the Web recalls Chun’s observation in *Control and Freedom* of the “banality” of being online, as she finds that representations of the Internet “as ‘theory come true,’ as the future in the present” have been revealed to be “inflated promises, usually accompanied by knowing disappointment” (Chun 23). *ARTIST’S STATEMENT* exemplifies an irreverent approach to the intersection of “art,” speed and “boredom” evident in YHCHI’s work. “I’VE BEEN / THINKING //ABOUT / IT NOW // FOR AT / LEAST / THE LAST // FEW / MINUTES,” is the narrator’s bathetic opening gambit, before musing that the Web, “THE NEWEST / MULTIMEDIUM,” is the greatest chance to “MAKE SOMETHING // DUMB” or “BETTER YET. // BORING. // BREATHTAKINGLY BORING. // DEATHLY BORING: // ART.” (YHCHI, *ARTISTS STATEMENT*). Patricia Meyer Spacks suggests that “[b]oredom, acknowledged, mocks meaningful literary experience” (Spacks 2), and this is certainly evident in YHCHI’s wilful anticipation of a bored reader. The conflation of boredom with technological delay in *ARTIST’S STATEMENT* offers the Web as a space where banal mediocrity seeps into every process. The artist narrating their own delay eventually wonders “AM I / JUST / USING / WEB ART // LIKE / EVERYONE / ELSE // ON THE / INTERNET / TO CRY OUT // ‘I AM! / I AM! / I AM!’”, and speculates as to whether there is a

discernible difference between the “perfect artistic website” and “Terry’s Termite Page”. *ARTIST’S STATEMENT* contemplates the Web as an overflow of information which eventually becomes overwhelming, as it “ALL STARTS / TO LOOK / ABSTRACT, // COLORS, PLANES, // LINES AND / DOTS, // VISUAL / GIBBERISH, // MIND / NUMBING, / BORING, // IN A / WORD: // BEAUTIFUL” (YHCHI *ARTIST’S STATEMENT*). The surplus of colours and information spill over to compose a version of the technological sublime, where boredom merges into a state of zen-like admiration, mind transfixed by the scale of these flows of information.

Massumi echoes YHCHI’s observations of sublime boredom when he suggests that the alternation between boredom and reward on the internet “sets up a rhythm of attention and distraction” (139). “Boredom,” he comments, “[w]ho hasn’t experienced that on the Web?” (140). For Massumi, the process of encountering information online is often accompanied by “a strange sense of foreboding: a sensing of an impending moreness, still vague. Next link.” (Massumi 140). Like Hayles, he compares the attention devoted to reading online with other media and narrative forms, but finds that hypertext combines “both modes” of attention:

Television assumes and fosters a certain inattention, as the viewing body is invited to zap channels or slip relays to other activities into the commercial slots and slow patches. Watching movies and reading books command considerably more attention, and thus tend toward the other direction. Hypertext surfing combines both modes. Link after link, we click ourselves into a lull. But suddenly something else kicks in, and our attention awakens. (Massumi, *Parables for the Virtual* 139)

In Massumi’s account, the “lull or daze” of following links may be suddenly sharpened into “a selective perceptual focus or a clarity of thought that strikes the foreground of consciousness in a flash of sudden interest or even revelation” (Massumi 140). YHCHI’s works betray a fascination by the potential for this flash of sudden interest or revelation. Endeavouring to become a point at which “attention awakens” (Massumi 139), YHCHI’s texts deploy a variety of devices, from the use of direct address to attempts to shock or surprise the reader with

twists of plot or alternating narrative perspectives.

ARTIST'S STATEMENT builds to a climax in which the narrator suddenly turns the full force of their figurative attention on an unsuspecting reader. "I LOVE YOU," the narrator declares, "DO YOU LOVE ME?", before offering an intimate description of his or her own body, with a heavily sexualised description of a foot gradually raised to his or her mouth. "MMMM," the final line purrs. It's partly a joke at the expense of the reader's inattention: if one misses the frame in which the narrator describes removing a sock, the uncertain nature of the body part approaching the narrator's waiting mouth means the account is considerably more libidinally charged. Such vivid presentation of bodily acts recur frequently in YHCHI's works; as I have noted, *DAKOTA* consistently alternates imagery of fast-moving technology with figures eating, with the final scene figuratively transforming the reader into a subject frantically consuming noodles, and *SAMSUNG MEANS TO COME* recasting a corporate entity as an embodied figure encountered in a domestic kitchen. These examples of an insistent return to bodily function and physical action reaffirm the impression of the Web as a space of "intimate distance," where the narrator constantly reaffirms their substantial presence, manifested in the form of the body's capacity to react and respond.

Although difficulties of "intimate distance" emerge via the confluence of terminologies of sex, power, and corporation in *SAMSUNG*, they also expose the banality of these terms as a means of expressing an experience of ecstatic arousal. Just before her passionate declaration that "I LOVE // POWER, // EGO-/TISM, // MEGALO-/MANIA, // CALCU-/ LATION // THE / INHUMAN, // THE CORPORATE- / NESS," the narrator pauses to offer a quick definition of "megalomaniacal," and wryly observes of her encounter with *SAMSUNG* that it was "not too bright to fuck me in my mother-in-law's kitchen". These asides ensure that the heady accounts of sexual/technological epiphany are deflated by reminders of the insufficiency of conventional language as a means of conveying extreme emotions. In frames which reference the phenomenon of typed roleplay and cybersex blossoming in popularity online in

the 1990s, *SAMSUNG* represents sexual climax in language rendered banal through repetition (Fig. 5). Here the repetition of “I COME AND COME // AND COME” fills the screen incrementally, in a deluge of text whose overwhelming repetition is used as a way of enacting the narrator’s sensory overload. YHCHI’s texts humorously literalise interpretations of technical and advertising terminology in order to explore the difficulties and pitfalls of navigating a highly technologised urban environment. In doing so, they present narrators who, experiencing constant demands upon both mind and body, retreat into fantastical situations as a means of avoiding their difficulty in “reading” and controlling their immediate surroundings.

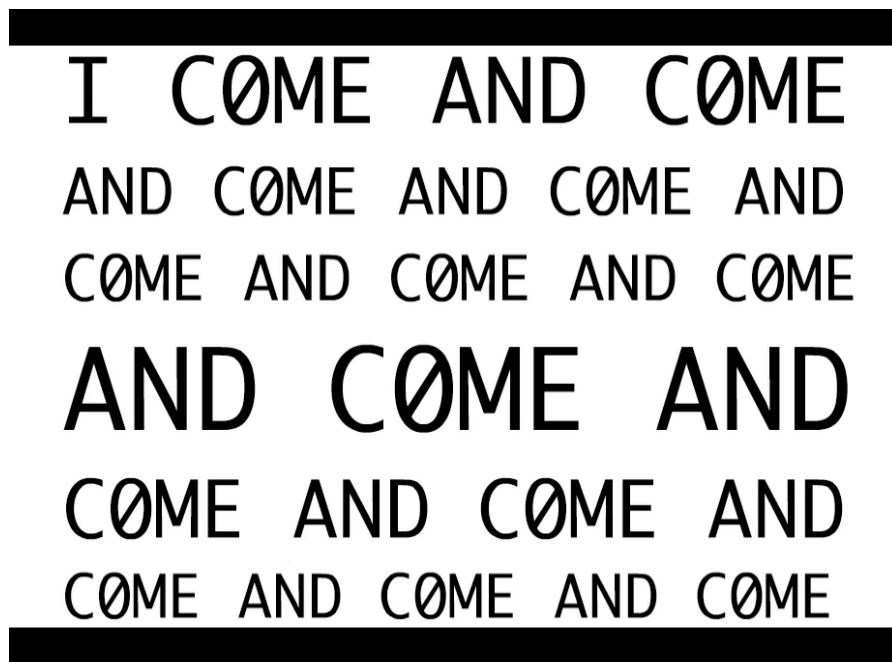


Fig.5

YHCHI’s interest in speed, immediacy and “information” is underpinned by an enduring concern with instances of glitches, banality and failure. In their representation of thwarted, difficult, strange or ineffective interactions with late twentieth-century technological phenomena, characters misunderstand or willfully ignore each other; narratives begin abruptly and are cut off just as quickly; narrators alternate between feeling themselves to be ignored or taunting an assumed audience to defy them by choosing to “zap to a different channel;” multiple narrators compete for attention. These effects take place not as a

celebration of “plurality of discourse”, but rather a dizzying representation of the difficulty of processing multiple narrative threads at once. In other words, these texts repeatedly enact a failure of attempts to represent or comprehend a “plurality of discourse.” The recurrent implication is that dialogue is constantly on the point of failure, or has perhaps already failed. “LINES ARE DEAD [...] CHAT IS DOWN [...] WEB IS DOWN”, the staccato lines of ALL FALL DOWN announce, while another narrative in the same piece ends with “N0THING N0W, / JUST TRAFFIC, STATIC AND FUZZ”. YHCHI repeatedly and deliberately use, exemplify and complexify the notion of sitting at the computer screen as a physically solitary but communicatively enhanced space, experimenting with location, tone and direct address in order to present undifferentiated individual statements of experience, anecdote and response.

The controlling processes described in these encounters are a vital theme for YHCHI, whose characters are depicted as pinioned by a series of systems – technological, corporate, national – which they are ultimately unable or unwilling to resist. Furthermore, YHCHI deliberately draw attention to the physical individualism associated with screen-based interaction, in works which increasingly strike up oddly one-sided “conversations” with the reader-viewer. Treated as a whole, the format and thematic content of YHCHI’s work emerges as a powerful commentary on the subjective roles of author and reader, locating them in a hierarchy of cause-and-response in which there is no room for compromise or a claim to “equality”. As I have argued, the performed indifference of YHCHI’s take me/leave me approach is notably distant from the model of interactive hypertexts whose impact still dominated digital poetics when YHCHI first began to publish their works online. Instead, YHCHI’s approach experiments with location, globalisation and simultaneity through a pseudo-conversational direct address which plays out in real time, anticipating the thrills and pitfalls of online communication and commercialised technoculture which would develop in the new millenium.

CONCLUSION

This thesis has addressed the 1990s as a distinct historical period, considering literary depictions of individuals as they encounter new or unfamiliar forms of computing technology. My study has endeavoured to show how representations of “every day” encounters with computing and the internet can reveal significant undercurrents related to ideas of comprehension, control and the commercialisation of technological spaces. As I have noted at several points, technologies change fast, and their predecessors are forgotten just as swiftly; for example, the present ubiquity of wireless broadband connections in economically privileged areas of the world might make the trials and frustrations of a screeching dial-up connection in the late 1990s seem a relic of the distant past, despite the relatively short space of intervening time. Computing technology in the final decade of the twentieth century had not yet been conjoined with widely available mobile technologies, and the computer retained a veneer of enchantment, certainly for the first half of the decade. As I have demonstrated, this makes the 1990s a particularly valuable period of study, and my focus on literary accounts of uncertain and amateur encounters with computing technologies has aimed to recapture some of the affective and intellectual responses to this period of swift and conclusive change.

My interest in this thesis has been the use of computers to facilitate creative writing. In considering the role of amateur and non-expert approaches to computing technology, I have shown how experimental forms and formats can be used to capture the affective and intellectual repercussions of technologised environments. Authors who engaged with the apparent possibilities offered by new technologies and new media – such as Kamau Brathwaite and Jeanette Winterson – found themselves in the grip of a steep learning curve, a factor which seeps into their literary portrayals of encounters with computing technologies. The relationship between the literate individual and their computer

was often dominated by habitual references to the paper-based forms they'd been used to valuing and using, and accompanied by anxieties about loss of data, concerns amplified by authors' sense of the possibility for losing control over the complex mechanisms of the personal computer.

As my analysis shows, utopian proclamations of technology's empowering potential tend to contrast sharply with anxieties about the pace of technological change and difficulty of mastering new forms and formats. My opening chapter set out to examine the benefits of writing in 'electronic space', arising from the computer's capacity to present immediately erasable and rewritable text onscreen. By focusing on the example of Kamau Brathwaite and other enthusiastic commentators in the early 1990s, I considered how 'electronic writing space' might offer authors an opportunity to produce creative text in a uniquely flexible visualisation. In the utopian proclamations of Brathwaite and Bolter, electronic writing space appeared to be an opportunity for greater literary inclusivity. However, as I have discussed, this is countered by concerns about practical accessibility of computing technology. For Brathwaite, the word processor's capacity for trial and error would enable previously hesitant users of language to write with greater ease, while Bolter, Coover and Landow believed the multistranded format of hypertext was an opportunity to incorporate a multitude of voices, unranked by the author in terms of structural hierarchy. Yet Chapters Three and Four demonstrate that imagery of the capacity of 'electronic writing space' to facilitate an open polyvocal environment was not always borne out in users' practical experiences.

Though they often acknowledge the enabling potential of computing technology and the Web, many of the works analysed in this thesis contrast impressions of the potential empowerment associated with electronic media with instances of fear and anxiety. The kind of vehement enthusiasm expressed by Brathwaite and Bolter for the enabling qualities of 'electronic writing space' sits uneasily alongside other problems and concerns arising with the exploding popularity of personal computing and the Web as the 1990s progressed. Chapter Two analysed the apparent ease with which digital texts could be erased or

overwritten developed into a source of anxiety, itself a legacy of earlier centuries' anxieties about disembodied voices and ephemeral texts. These concerns relate to the perceived instability of storing an archive of electronic 'text' in its many possible forms, where the potential loss of an archive of work is anticipated as the plausible effect of computing technologies' breakdown, whether local or cataclysmic. With this fear of machinic malfunction comes awareness of the encroaching obsolescence of certain platforms, a concern which has proved a practical issue in the case of hypertext fiction, where the pace of software and systems development has led to cutting-edge and innovative formats becoming swiftly outmoded and in some cases inaccessible.

Fears about commercialisation and the disorienting effects of illegibility and erasure emerged in my discussion of Young-Hae Chang Heavy Industries' use of fast-moving text, displayed onscreen through the audience's web browser in a format designed to limit the reader's capacity to pause or slow down the onslaught of text. Like Gibson's much earlier experimentation with the self-deleting poem "Agrippa", YHCHI's deliberate reduction of the reader's level of control over the text invokes an effect of disorientation and disempowerment which mimics experience of other electronically mediated environments. Gibson's work foreshadows YHCHI's experiments by enforcing limitations on readerly access and refusing to permit concentrated attention to the text. However, unlike YHCHI's endlessly replayable (and often automatically looping) videos, the supposedly singular encounter with 'Agrippa' emphasises the widely perceived erasability of electronic media in the early 1990s. It also aligns such moments of erasure with instances of obscured image and text in the 'analogue' medium of printed photographs and handwritten notes. "Dream Chad," Brathwaite's short story, is similarly concerned with a gap between printed materiality and electronic ephemerality, portraying an attempt to type a narrative which is repeatedly thwarted by a computer as it deletes, or seems to delete, the text just when it reaches completion. Whereas *Agrippa* offsets the uncertainties of electronic erasure onto the reader, Brathwaite's tale portrays the frustrations of an amateur computer user whose attempts to preserve a text composed in electronic space are repeatedly thwarted by apparent machinic malfunction. As I have shown, each of

these works is concerned with links between textual reproduction and the representation and preservation of human memory.

The prospect of a potentially irreparable loss of data, particularly failures to preserve or perceive information stored in various written media, has recurred throughout this thesis. This concern reflects a broader series of cultural anxieties regarding technological breakdowns in the 1990s, as a non-expert population encountered computing technologies in many hitherto untouched areas of everyday life. Such issues are perhaps best illustrated by the surprisingly widespread panic in the late 1990s colloquially dubbed the ‘Millennium Bug’ or ‘Y2K’, a widely promoted fear that ubiquitous computing systems would be unable to handle the transition of dates from “31/12/1999” to “01/01/2000”. Like many of the perceptions central to this thesis – from fears about erasure to the thrill of cyberspace and online anonymity – the pseudo-apocalyptic scenario imagined around technological collapse in Y2K seems quaintly alarmist in retrospect. Nevertheless, the Y2K panic crystallised a public appetite for discussions about the practical implications of living in an increasingly digitised world, on a national and international media stage – precisely the kinds of debates explored in the texts I have described here. It appears as the antithesis to ebullient and often hyperbolic claims adhering to digital technologies in the early to mid 1990s; exultant commentaries which heralded the positive effects of the ‘information superhighway’, economic enthusiasm for an apparently unstoppable “dot.com boom”, political and social claims for the ‘electronic frontier’. The equally hyperbolic negative rhetoric around Y2K chimes with oft-repeated concerns expressed in times of swift technological change: fears about control and the impact of mysterious and misunderstood processes on the functions of everyday life. My analysis has focused on how instances of erasure appear to affect individuals as they attempt to read, write or preserve textual narrative, and the Y2K panic confirms the undercurrent of unease specifically related to the increasing use of computers for the storage and preservation of information.

Approaches to technologies have altered considerably since the 1990s, and dominant concerns have shifted. Popular advice of the 1990s clung to the notion that digital texts were in some way ephemeral, and that the only way to secure

one's files and documents was to print them on paper. Contemporary approaches, by contrast, are dominated by exhortations to keep digital copies and backups on different systems, while Kirschenbaum has argued that all electronic texts involved multiple inscriptions. With the then-incipient millenium in mind, however, I consider it vitally important that the period of the 1990s preceded the development of web-based 'cloud computing', viral marketing, retweeting, reblogging, all of which encourage and facilitate the spread of apparently identical electronic copies across a vast network of differently located servers. In the contemporary digital environment, it has become increasingly difficult to be certain that a file is unique. Multiple copies proliferate across the internet, and it is rare for a computer or device to be entirely unnetworked. In the time period I have considering in this thesis, however, this was emphatically not the case, and this has emerged as an essential factor for all the literary works considered here.

Writers and theorists of the 1990s were often greatly concerned with finding ways to distinguish between analogue and digital materiality, tending to define these differences in terms of user experience. In other words, accounts often focused on how it *feels* to access a text via electronic media, the difficulties in establishing how long that text might be available, and discussion of the qualities particular qualities adhering to this new space as a site for recording personal and imaginative experiences. Literal and metaphorical portraits of technology in the 1990s emerged in the context of conflicting views of personal computing, torn between the computer's capacity to be a new and thrilling tool for self-expression, but also variously approached as baffling, unnecessary, or irrelevant.

The kinds of thrills and anxieties I have identified and explored in this thesis are by no means relegated to the past. The slick interfaces of modern operating systems, complete with automated backups and user-friendly prompts, might seem a dream compared with the relatively unstable functioning of, say, a 2-year-old desktop PC running Windows '98 in the year 1999. Yet despite the considerable advances in systems' stability, users continue to express frustration with the continuing limitations and annoyances of interacting with networked or unnetworked machines. Catastrophic crashes still occur, machines break down,

work is lost and whole databases can be threatened; in many ways, a contemporary rhetoric of “cyber warfare” and seemingly limitless surveillance has amplified these concerns. The proliferation of acts of deletion and permanent loss described and performed by the texts described in this thesis are therefore expressions of the difficulties encountered when adapting to a new and oblique way of composing, saving, sharing and encountering creative work in electronic environments. Analogous to the reader’s reduced agency in YHCHI’s aggressively self-propelling poems, these concerns are a direct response to an impression of a fast-changing and often perplexing technological environment. Such themes of readerly disorientation and performed illegibility linger on the ramifications of voluntary and involuntary acts of erasure, and we continue to live through the legacy of these fictions of the 1990s.

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