

Rape and the Memex

A spectre hangs over the fledgling discipline of Cyber Studies, or to be more specific, rather than a spectre we may say that a voodoo doll by the name of Mr. Bungle hangs over the discipline. Since the events of 1993 described by Julian Dibbell in ‘A Rape in Cyberspace,’ academic interest in cyber rape has tended to be organised around terms defined in relation to the actions of Mr. Bungle in LambdaMOO and their subsequent aftermath.¹ Furthermore, the discussions of cyber rape frequently serve as a crucial point of reference for a number of arguments on either side of long standing debates over the relative harmlessness and ethical scope of the internet. Those who wish to dismiss the idea that these events constitute a case of rape in any legal sense focus on the fact that no bodies touched, whereas a range of arguments on the other side of the debate hinge on suggestions that the issues in question – is this rape? are anti-social behaviours endemic to the net? and so on – should never be reduced to true or false statements about actual physical harm. Yet in all this talk of the actuality of the bodies involved, something else has been conspicuous in its absence: the location or *site*. It is one thing to say that LambdaMOO is a virtual meeting place and so its rooms are not really ‘real’ in any tangible sense, but this does not take full account of how the users of a virtual meeting place imbue that site with a sense of place, such that the meetings that occur in these environments are afforded a degree of personal investment. This essay will outline what I see as the relevant formations – discursive, technological, historical – that shape the transformation of internet architecture into virtual meeting place; that is, of cyberspace into cyber-place. By giving a material context to the so-called Bungle Affair, I suggest that we can begin to reshape the terms of the debates about cyber rape and, more generally, the ethical scope of internet practice.

1. ‘A Rape in Cyberspace’

The incident to which the title of Dibbell’s essay refers took place on a Monday night in March 1993, in the virtual meeting place known as LambdaMOO. A MOO, for the

¹ Julian Dibbell, “A Rape in Cyberspace: or How an Evil Clown, a Haitian Trickster Spirit, Two Wizards and a Cast of Thousands Turned a Database into a Society,” *The Village Voice* 38.51 (21 December 1993): 26-42.

benefit of those who may be unfamiliar with the term, is an object-oriented MUD. For the benefit of the same people, the acronym MUD stands for Multiple-User Domain or Multiple-User Dimension, or some variant of the same terms. What this means is that the MUD was developed to enable a number of users to exchange information in a single on-line domain and at the same time. The object-oriented version of a MUD, or MOO, was developed by organising a domain along the lines of an array that is structured as if it possessed physical and spatial properties. Instead of a single domain, the meeting place appears to be organised as a number of different rooms, with users able to opt to interact with the occupants of any given room in real time. Dibbell thus describes a MOO as a ‘database especially designed to give users the vivid impression of moving through a physical space that in reality exists only as descriptive data filed away on a hard drive.’² The ‘reality’ component of Dibbell’s description is worth noting here, as it is around a binary of the real and the virtual that so much discussion of this incident, including Dibbell’s own analysis, has subsequently revolved.

Mr. Bungle was not, of course, the name of the user who perpetrated the acts of that night in 1993, just as Julian Dibbell did not use his own name when he logged in to LambdaMOO. The users of LambdaMOO, like the users of so many environments in cyberspace, did so by adopting a username and – in the object-oriented logic of the site – an avatar. Dibbell begins his account of the Bungle Affair by detailing the fact that his own involvement was via ‘the persona and appearance of a minor character from a long-gone television sitcom’: his avatar was Dr. Bombay.³ Here again, we see the binary of the real and the virtual established at the level of how users are presented to each other in this domain. Yet this is where Mr. Bungle enters the frame. When he appeared to other users in LambdaMOO, he would have seemed no different from any other avatar. Yet Mr. Bungle was in ‘reality’ what is known as a *voodoo doll*, which is a subprogram that enables the user to override database controls and enter statements that display as if they have been entered by another user. The result is that avatars do and say things that were not intended by their users.

On this night in March 1993, Mr. Bungle entered the living room – subprogram # 17 in the LambdaMOO database – and commenced by forcing the avatar named legba to

² Ibid., 28.

³ Ibid., 26.

perform sexual acts with him. Legba's imprecations forced Mr. Bungle to retreat from the living room but with the voodoo doll program already in the system, he was able to continue to control the actions of other avatars without being there in the living room with them. After he appeared to have departed, he then forced another avatar named Starsinger to perform sexual acts on other avatars in the living room, which included legba, then to violate herself with a steak knife, and to say and do a range of things that were, needless to say, not intended by her user. Mr. Bungle's attack lasted until a wizard named Zippy – a user with administrator-level access – intervened by 'caging' the voodoo doll, a process that involved removing from the user all access to LambdaMOO without deleting the avatar or the user's account.⁴ It was only after the wider LambdaMOO user cohort debated the issues on a general discussion forum that it was eventually decided to have Mr. Bungle 'toaded' – deletion of avatar, username, and account.⁵

For Dibbell, it is this aftermath of the events of that Monday night in March 1993 that provides him with the topic of greatest interest. As the full title of his essay suggests, the Bungle Affair represents the moment that 'turned a database into a society', since it forced the LambdaMOO user cohort to identify the terms of consensus that would shape them as a community rather than as just a disparate amalgam of users. Wizards had previously abnegated any responsibility for sending avatars to the 'Cinder Pile', but the reaction to Mr. Bungle's actions was like the sounding of the clarion call: the community had asserted itself, and Mr. Bungle was not welcome within the confines of LambdaMOO – exclusion and inclusion, self-determination, and normativity had been expressed in response to a perceived breach of the previously unspoken rules of conduct. This is to say that the breach represented the moment at which the unspoken boundaries of community were forced to express themselves through the user cohort. As Dibbell points out, the terms of this reading are already present in the initial post by legba to the general discussion forum, the evening after Mr. Bungle's rampage in the LambdaMOO living room:

Mostly I tend to think that restrictive measures around here cause more trouble than they prevent. But I also think that Mr. Bungle was being a vicious, vile

⁴ Ibid., 28.

⁵ Ibid., 33.

fuckhead, and I ... want his sorry ass scattered from #17 to the Cinder Pile. I'm not calling for policies, trials or better jails. I'm not sure what I'm calling for. Virtual castration, if I could manage it. Mostly, it doesn't happen here. Mostly, perhaps I thought it wouldn't happen to me. Mostly, I trust people to conduct themselves with some veneer of civility. Mostly, I want his ass.⁶

Dibbell notes that against the backdrop of what the conventions of virtual reality tell us was nothing short of a brutal rape, the attacker's first victim here works through her own rage and outrage – which, from conversations he had with the author of the post, Dibbell assures us were genuinely post-traumatic – to produce what is little more than a scolding for a breach of 'civility' by the user.

Dibbell's analysis of the Bungle Affair hinges on this very term: civility. His reading is ultimately a critique, *à la* Foucault, of the use of death by toading as the basis for a civil society, real or otherwise. Yet as a user of LambdaMOO himself, Dibbell treads cautiously along this path. As I have noted, he establishes from the outset that what takes place in LambdaMOO is always marked by an ambiguous relation to the real world: the site is itself little more than 'a middlingly complex database, maintained for experimental purposes inside a Xerox Corp. research computer in Palo Alto and open to public access via the internet'⁷ and Dibbell enters the site under the guise of an avatar, as do all of the users. As a user, of course, Dibbell cannot be too reductive about the status of the Mr. Bungle attack, at least inasmuch as it produced real world trauma for the users whose avatars were accosted. While he is quick to assert that 'no bodies touched' in the Mr. Bungle incident,⁸ then, Dibbell cannot simply dismiss the claims of his fellow users, so he is drawn into prosaic ruminations about the 'illusion of presence' that inheres in the virtual meeting place and ultimately about the capacity for on-line sexual descriptions to engage the glands 'as throbbingly as they would in a real-life assignation.'⁹ From this point, Dibbell concludes that 'when it comes to sex, perhaps the body in question is not the physical one at all, but its psychic double, the

⁶ Ibid., 30.

⁷ Ibid., 28.

⁸ Ibid., 28.

⁹ Ibid., 29, 31.

bodylike self-representation we carry around in our heads,' and it is this comment that leads him quite rightly to invoke the name of Foucault.¹⁰

Whereas Dibbell proceeds from this point to view the Bungle Affair through a lens he has borrowed from Foucault, this direction was not followed by those critics who saw fit to make use of the Bungle Affair as a representative case. I would argue that in the years that followed, a number of critics replicated the terms of Dibbell's binary of the real and the virtual in order to pursue the issue of the status of cyber rape, without the stipulation that this binary was originally expressed in order to account for the range of social issues confronted by the users of LambdaMOO in the wake of the Bungle incident. These critics are not as concerned as Dibbell is with the capacity for a breach of civility to be the cornerstone for communal self-determination. Instead, the critics focus more directly, as Alison Smith has noted, on the actions of Mr. Bungle to debate the 'status of the incident: some call it a game, others a violation of netiquette, some consider it analogous to a physical assault and others respond by saying "if you can't take it, get out."' ¹¹ The positions adopted in this debate over the status of the Bungle Affair duplicate the binary of the real and the virtual: even those who consider the incident to be as serious as physical assault nevertheless maintain the association by way of an analogy. Even if it was not 'really' assault, the incident was still 'virtually' assault.

A few examples will bear out this point. Catharine MacKinnon recognises that while real life rape can be distinguished from cyber rape on the basis of physical contact, both are motivated by power, control and domination and should therefore retain an equivalent status in terms of the intent that defines them.¹² Dale Spender's sweeping analysis of women, power, and cyberspace from 1995 touches on the Bungle Affair as evidence of the ethical dictum that 'as much mental pain and damage can be inflicted in cyberspace as in real life,' but 'getting out' of cyberspace is no more an option for women than getting out of real life.¹³ Along these lines, Alison Smith asserts in 1998

¹⁰ Ibid., 31.

¹¹ Alison Smith, "Cyberlife and Cyberharm: A Human Rights Approach," *Social Alternatives* 17.4 (October 1998): 9.

¹² Catharine MacKinnon, "Rape, Genocide, and Women's Human Rights," *Harvard Women's Law Journal* 17 (1994): 10.

¹³ Dale Spender, *Nattering on the Net: Women, Power, and Cyberspace* (North Melbourne: Spinifex Press, 1995), 208.

that International Law needs to be amended to take into account the broader impact of cyber space and she cites the Bungle Affair as a test case for human rights advocacy: ‘What Mr Bungle did that night in cyberspace, as much as any “real life” rapist does, was to violate the conceptual principles underpinning human rights scholarship: the inherent dignity and worth of human beings.’¹⁴ What each of these examples does, in spite of an express wish to argue for the equivalence of cyber rape to ‘real life’ rape, is to ensure that the distinction between the two realms is also maintained.

This is not to suggest that my purpose here is to dismiss the important role played by scholarly work on cyber rape in addressing issues relating to legislation, human rights, or even redefining rape as a criminal category *per se*. I point out that such studies tend to reproduce the binary of the real and the virtual merely to indicate that there may be a problem in relying on debates about cyber rape to set the terms for discussion of the nature of cyberspace writ large. The problem is of course that the Bungle Affair, as an example, is hardly typical of the vast majority of practices that constitute cyberspace. Furthermore, the focus on rape means that the terms of the discussion are by the very nature of the offence limited to accounting for the absence or presence of the body in debates about the status of the act both inside and outside cyberspace. Dibbell’s own analysis of the Bungle Affair treads this ground warily before moving onto a broader social field of investigation. Critics like MacKinnon, Smith, and Spender also move from the specific facts of cyber rape to broader issues but they are more insistent than wary when it comes to addressing these facts.

What gets overlooked in all of this shifting from the specific facts of cyber rape to the broader social field, and in the reproduction of the binary of the real and the virtual on which such a shift is grounded, is a more detailed investigation into the nature of the site in which the attack took place. In what follows, I propose to consider a range of formations that constitute the terrain on which interactions in subprogram # 17 (a.k.a. the living room) of the LambdaMOO database – for example – take place. This will enable us to situate the Bungle Affair historically, not as a foundational moment in the study of cyber rape but as a practice that – for better or worse; perhaps worse is most accurate here – is defined to some extent by its material condition. This will in turn, I

¹⁴ Smith, “Cyberlife and Cyberharm,” 9.

suggest, enrich any discussion we may have about the status of cyber rape in terms of how it is located both within cyberspace and the 'real life' of the user.

2. Textual into Literary Machines

There are a number of different histories that can be written about the emergence of the internet. In *Internet Architectures*, Daniel Minoli and Andrew Schmidt begin with the development of packet switching technologies in different projects, but at around the same time, by Leonard Kleinrock at UCLA, Paul Baran of the Rand Corporation, and Donald Watts Davies of the National Physical Laboratory in the United Kingdom, in the early 1960s, as their interest is in the technology that most immediately shaped the architecture of the internet.¹⁵ In *Media Technology and Society*, Brian Winston is concerned more broadly with the long history of the 'information revolution' in which electronic networks as such can be traced to the invention of the telegraph, although Winston is keen to locate every 'invention' within a longer evolutionary framework of scientific competence and ideation, the development of models, prototyping, and then the final production of a working technology.¹⁶ In *History of the Internet*, which is (as the name suggests) more directly interested in the history of the internet, the authors focus on the early development of the computer, from Charles Babbage's design for the Difference Engine in 1833, as well as the refinement of telegraphy during the late nineteenth century.¹⁷ The point at which all of these histories converge is with ARPA (the Advanced Research Projects Agency in the United States) and the development of a networking technology for enabling information sharing between the computers within the agency across several different locations. ARPANET was not merely some prototype for the later development of the internet; rather, it was the network to which all other networks would become connected as the project expanded its parameters. It is this same interconnection of networks that now constitute the internet as we know it today, even though ARPANET itself was disconnected in 1990.

¹⁵ Daniel Minoli and Andrew Schmidt, *Internet Architectures* (New York: John Wiley & Sons, 1999), 12-14.

¹⁶ Brian Winston, *Media Technology and Society, A History: From the Telegraph to the Internet* (London: Routledge, 1999).

¹⁷ Christos J. P. Moschovitis and others, *History of the Internet: A Chronology, 1843 to the Present* (Santa Barbara: ABC-Clio Inc., 1999), 3-7.

Before we look further at the role of ARPANET in shaping the internet as we know it today or, more specifically, as it was known to the users of LambdaMOO in 1993, we need to look briefly at what we might call the conceptual underpinnings of this global networking technology, so that we might usefully expand on Dibbell's description of LambdaMOO circa 1993 as being only a middlingly complex database. It is true that, as Minoli and Schmidt note, 'major paradigm shifts are being driven by the Internet ... One of the most fundamental of these is a migration away from traditional telephony like multiplexing systems to a *packet*-based Internet.'¹⁸ Such a claim suggests that any history of the internet presents a radical paradigm shift away from the technologies of telegraphy and telephony, unlike those other histories outlined above. Nevertheless, I think it is necessary, in coming to terms with the relationship between the architecture of the internet and the use of this technology to establish virtual meeting places, that we consider the extent to which the emergence of the internet might fit within another history that is less about information exchange – the *raison d'être* of packet switching theories and applications – and more about ideas associated with *meeting in a place*.

A crucial turning point in the prehistory of the internet was an article published in 1945 by Vannevar Bush.¹⁹ In "As We May Think," Bush proposes a desktop sized machine he calls a *memex*: 'a machine in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory.'²⁰ The memex was developed by Bush as a thought experiment, and the machine itself was never built: he envisaged that its principal technology would be microfilm and he did not imagine that existing computer technology could be refined to the point at which it would possess potential domestic applications of this kind. Yet in the memex, Bush was not merely imagining a domesticated information storage and retrieval system; rather, this machine would *augment human memory* by allowing the user to record and revisit any number of information trails through the storehouse of all the books, records and communications a human being could acquire throughout a lifetime.

¹⁸ Minoli and Schmidt, *Internet Architectures*, 12.

¹⁹ Vannevar Bush, "As We May Think," *Atlantic Monthly* 176 (July 1945): 101-108.

²⁰ *Ibid.*, 106.

Why should this obscure article published in a non-scientific periodical some twenty years before the first ARPANET computers were networked together be seen as one of the crucial turning points in internet prehistory? It would certainly be easy for any historian to overlook this article given its relative obscurity, but we only need to do two things to emphasise its significance: we can understand just how influential Bush himself was, at least in an institutional sense if not in terms of his contribution to the field; and we can also try to understand the extent to which this small experimental proposition reconfigured the conceptual terrain upon which networking science would later develop. First, the man: Bush was far from a minor crackpot publishing a one-off epiphany. Prior to World War Two, Bush had been a successful Electrical Engineer, working on the development of calculating machines, and teaching at MIT – indeed, his students included Claude Shannon, one of the pioneers of communications models based on electronic technologies. During the war, Bush was elevated to the position of chief scientific advisor to President Roosevelt initially as the founder of the National Defence Research Committee in 1940 and then in 1941 as the director of the Office of Scientific Research and Development. After the OSRD was disbanded, Bush lobbied for the establishment of a similarly broad-reaching peacetime organisation, although his vision was not realised until the establishment of ARPA by President Eisenhower in response to the success of Sputnik in 1957.

Clearly, as the chief scientist in the land circa 1945, when Bush spoke other scientists listened. Yet it does seem to be something of a paradox that he elected to publish “As We May Think” in a non-scientific publication. One reason for this, I suggest, is to be located in the kind of conceptual terrain that he was mapping in the article, which will bring us to the second thing that we can consider to emphasise its importance. While Bush was a prominent Electrical Engineer, the memex proposal was, as noted, based on an assumption that computer technologies would be unable to match the storage capabilities of microfilm, at least not for the purposes of moving this technology into the domestic market. For Bush, then, the memex was never meant to be an extension of his work on computational machines; rather, it was a proposal that marked a desire for a foray into a different kind of technological field: a shift from the computational machines with which Electrical Engineering concerned itself to the idea of a *textual machine* that operated according to the logic of human memory. We can appreciate,

along these lines, why Bush did not see this proposal as fitting into the schema of his existing research, and as a work of pure speculation it must have seemed better suited to a more general readership in 1945.

Whence, we may therefore ask, its contribution to networking science? Rather than see Bush's proposal for a memex as a material contribution to the then future history of the internet, I think it is viable to see his thought experiment as a vital first step in what Winston calls the 'ideation stage of the Internet' because it makes possible the conceptual shift from computational machine to textual machine through the idea of an 'associative databank,' to use Winston's description of a fundamental logic of the memex.²¹ This conceptual shift would later be implemented through the involvement of Joseph Licklider as the director of the Information Processing Techniques Office within ARPA from 1962 to 1964. Licklider was trained as a psychologist but moved to MIT after the war to begin working with the human-engineering group on human-computer interaction. In 1960, he published an essay on human-computer symbiosis which outlined the potential for better interfaces to facilitate the use of computers by non-experts.²² Furthermore, during his time at ARPA, Licklider pursued this vision of enhancing the human-computer relationship by advancing his agenda for developing an 'intergalactic network,' the term which later became shortened to 'inter-net' as the descriptor for these new technologies being developed at ARPA.²³ Licklider reported to his superiors that ARPA/IPTO were uniquely placed to shape the future directions of computer technology as a 'communication medium between people [which] dwarfs into relative insignificance the historical beginnings of the computer as an arithmetic engine,' since even the universities remained held in the grasp of this concept that the computer was nothing more than an arithmetic engine.²⁴

ARPANET was initially developed in order to solve a specific problem: how best to maximise the research that could be undertaken on a single computer when each of the computers in ARPA's various research locations contained different data. It was possible to transfer data from one to another using a conventional transport method,

²¹ Winston, *Media Technology and Society*, 322.

²² Moschovitis and others, *History of the Internet*, 49.

²³ Michael Hauben and Rhonda Hauben, *Netizens: On the History and Impact of Usenet and the Internet* (Los Alamitos, California: IEEE Computer Society Press, 1997), 97.

²⁴ *Ibid.*, 98.

but by the time one computer was updated to include the data from another, the data on that other machine had already been amended. For the sake of efficient use of the technology available, it would be necessary to store all of the data at all terminals at all times. The goal was, in a sense, to realise with computer data precisely what Bush had proposed using microfilm technology. No surprise, then, that after Licklider left ARPA, a book appeared under his name outlining a two year study undertaken during his term as director of IPTO, with the goal of identifying the shape of ‘libraries of the future’ and listing Bush’s article as the prime motivation for the project.²⁵ Clearly, Licklider was influenced by Bush’s proposal in his thinking about the solution to ARPA’s research problem. Yet where Bush thought the computer incapable of being the textual machine he envisaged in his memex proposal, Licklider saw networking technology as the way forward for computers to be developed beyond the arithmetic paradigm.

At the same time that Licklider was overseeing early work on the ARPANET project, Theodor Nelson was working on a problem also inspired by Bush’s memex proposal. In 1965, he coined the term ‘hypertext’ to refer to the concept of information that was organised in a spatial manner rather than in linear, sequential fashion.²⁶ As a youth, he began grappling with the idea that writing and reading always followed a sequential pattern and did not accommodate thought arranged in a more expansive, spatial way.²⁷ Following a degree in philosophy, Nelson began a graduate sociology program during which time he began working with computers, seeking to develop the technology as a literary machine. Influenced by his encounter with Bush’s article, Nelson developed the idea of hypertext to refer to ‘*nonsequential writing* – text that branches and allows choices to the reader, best read at an interactive screen.’²⁸ Like Licklider’s account of the library of the future, Nelson’s vision represented an attempt to map the memex proposal onto the broader book culture shaping modern life. For Nelson, hypertext would enable the creation of a much larger system designed to provide access to the whole of the ‘docuverse’ but also to enable the paths travelled between documents to be recorded and reproducible: this system he dubbed Xanadu, after ‘the mysterious palace in Coleridge’s poem “Kubla Khan” – a great poem which

²⁵ J.C.R. Licklider, *Libraries of the Future* (Cambridge, Massachusetts: MIT Press, 1965).

²⁶ Moschovitis and others, *History of the Internet*, 107.

²⁷ *Ibid.*, 108.

²⁸ Theodor Nelson, *Literary Machines* (Sausalito, California: Mindful Press, 1992), 0/2.

he claimed to have mostly forgotten before he could write it down – Xanadu seemed the perfect name for a magical place of literary memory.’²⁹

The first Hypertext Editing System (HES) was developed on the basis of Nelson’s ideas in 1968 by Andries van Dam, although Nelson admits to being unhappy with this system, since it was mainly a facility for encoding specific blocks of text with the link to a specified other textual location, rather than a system for enabling the reader to create and record new associative trails with each traversal.³⁰ Nevertheless, the HES became the prototype for what would later become the Hypertext Mark-up Language (HTML) developed by Tim Berners-Lee by 1991, with which technology the World Wide Web (WWW) was spawned in 1992. Nelson has continued to work on Project Xanadu over the years, convinced that the WWW is not the realisation of his vision for ‘a magical place of literary memory,’ but there is no doubt that the web, as the dominant modality for storing and processing text on the internet, is shaped by the paradigm of Nelson’s vision for a literary machine, even if it is not the thing itself as he envisions it.

3. Narrative En-Closures

The influence of Bush’s memex proposal cannot be understated. Whereas the WWW is a far cry from Bush’s microfilm cabinet, the overarching principle of augmenting human memory via an expandable archive with a capacity to record information trails – the fundamental logic of the memex – clearly underscores the subsequent history of the internet. How does this history map onto LambdaMOO and the Bungle Affair? To make this connection explicit, first recall Dibbell’s description of LambdaMOO as a ‘middlingly complex database’ wherein a MOO is structured as a series of interlinked subprograms. Each subprogram enables several users simultaneously to both enter and display strings of text. Viewed in this way simply as a database, LambdaMOO can in fact be easily characterised – and therefore just as easily dismissed – as ‘mere words’ whereby any discussion of cyber rape in LambdaMOO would struggle to elevate past the issue of the relative capacity for harm of names versus sticks and stones.

²⁹ Ibid., 1/30.

³⁰ Ibid., 1/31.

Yet if we shift our attention back to the memex proposal and its subsequent influence on a couple of key developments in the history of the internet, we may be able to gain a more holistic sense of the ‘place’ of LambdaMOO. If we focus on this idea that the history of the internet is a process of bringing to fruition the idea of a textual machine that augments human memory, we should be able to begin to locate the ‘mere words’ that are entered into and output by the LambdaMOO subprograms within a different paradigm. From what Winston calls the ideation stage of the internet, there has been an explicit push from within the leadership group on several projects associated with the development of the internet to transform the computer from a storehouse of facts to a facility for interconnecting data in ways that map onto the associative model of human thought process. Even more than this associative model, in fact, Licklider and others also pushed the agenda of using networking science as the basis for communal models of computer use. In *Netizens: On the History and Impact of Usenet and the Internet*, Michael and Rhonda Hauben point out that Licklider’s vision for a bold new world of communications via computer networks laid the ground on which communal practices emerged as a standard *modus operandi* for the developments in networking technologies that followed: via the RFC system of information exchange and the rise of Usenet, for example, growth in the early internet went hand in hand with a growing sense of participatory community through electronic communication.³¹

The strings of text that are entered and output through the LambdaMOO interface can no longer be thought of as mere words. While it may be true in an ontological sense that within the database these words exist in a ‘mere’ fashion as strings of code that translate a keystroke into a graphically rendered output as letters of the alphabet, the status of these keystrokes *vis-à-vis* the user *but also the status of the database within the broader system to which it belongs* must force us to expand the way we conceive of the material stuff of which the MOO is constituted. Rather than mere words, text entered and output via the LambdaMOO interface must be imagined primarily in the mode of interlocution. Yet we must be careful to outline precisely what we mean here by interlocution. After all, it is one thing to simply note that networking science had as one of its goals a revolution in the nature of human-to-human interaction out of a

³¹ Hauben and Hauben, *Netizens*, 5-7.

science devoted to improving human-to-computer interaction, but it is another to be explicit in explaining how the former is overlaid on the latter. What we are seeking to explain, in a sense, is how a system based on the dream of improving ways to *read* is able to become a system for improving ways to *communicate*.

Let us explore this idea. We have noted that Nelson's vision for hypertext – Project Xanadu in its more ambitious form – was based on the idea of trying to map a system of reading and writing onto an associative model, although his understanding of the way the mind forms its associations is based on a particularly literary mindset. Even before Nelson articulated his vision as being wedded to the idea of literary memory, however, he had imagined that what was missing in codex culture was the capacity to enable a *spatial rather than sequential* logic to operate. It is easy to see that Nelson's vision for hypertext is not matched by the fairly static structure of the hyperlinks that define the pathways a user can follow in the WWW, yet I think it is just as easy to say that the potential for communication made available within various nodes or stopovers along these pathways does represent a point at which the logic of both a spatial and a literary memory is actualised. This is the point at which cyberspace – defined by Bob Kahn in 1972 as adhering to the principle of an 'open architecture'³² – closes over the architecture of the network by focusing a user on the here-and-now of a *place*.

It is when the user halts the traversal through the pathways of the web, I suggest, that the spatial imaginary underpinning Nelson's vision for Xanadu can be expressed, and it does this according to the logic of what he describes as literary memory. By this I mean that when the user settles on a location long enough to participate, he or she is confronted with a world comprised principally or in whole out of words. While it is true that the future history of the MOO and other synthetic world environments has become increasingly sophisticated in the graphical rendering of those objects toward which the domain is oriented, the nature of the user's engagement with these objects – including the user's own avatar – has never, in my opinion, fully broken away from the notion of the command word. In any case, it is certainly true that in 1993 the user of LambdaMOO was expected to create the illusion of spatial orientation principally through the words that described the virtual environment. As Nelson understood the

³² Minoli and Schmidt, *Internet Architectures*, 19.

situation as far back as the early 1960s, even a spatial imaginary emerges in the mind as a world created out of words, and this is always a world fashioned out of a literary imagination. To put it another way, what I am describing here is quite simply the idea that from the perspective of the user, *cyberspace is constructed narratively*.

This is not a particularly new idea, and indeed it is not particularly limited to the way people construct a sense of the worlds they encounter in cyberspace. In the past ten to fifteen years, theorists of narrative have begun to extend the scope of their discipline to include cognitive mapping, with the basic premise of ‘possible-world’ models and ‘frame theory’ being that the human mind makes sense of the world through the use of narratives or stories that we tell ourselves about our world and our place within it. The upshot of such arguments is of course that a user engages with a virtual environment in precisely the same way: by locating oneself within a story that makes sense of this environment as a possible world. The work of Marie-Laure Ryan is most useful in this regard, as she argues that narrativity is itself, always and already, a virtual process.³³ In the off-line world, of course, we rarely encounter this virtual process in a conscious way because what we cognitively map as a possible-world is also immediately present to us as our perceptual world, although reading literature does force us to heighten our sense of engaging with words on the page as part of the creation of a possible-world. I contend, like Ryan, that when we engage with on-line environments, we foreground a process that in an off-line environment functions behind – and is therefore hidden by – apparent perception. Going beyond Ryan’s argument, I suggest that this process is a residue of cyberspace having been developed within a paradigm of literary machines, that is, according to the visions of Bush, Licklider, Nelson and others.

Let us now map this process into LambdaMOO circa 1993. As a database, the site is constituted by an array of subprograms, but this array is far from infinite. The fact that subprogram # 17 is called the ‘living room’ automatically functions to limit the kinds of words that will be appropriate for use in this particular cyber-place. The description the user encounters shapes to some extent the narrative frame within which the user – more specifically, the user’s avatar – will be situated within this space:

³³ Marie-Laure Ryan, *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media* (Baltimore: Johns Hopkins University Press, 2001).

The Living Room

It is very bright, open, and airy here, with large plate-glass windows looking southward over the pool to the gardens beyond. On the north wall, there is a rough stonework fire-place. The east and west walls are almost completely covered with large, well-stocked bookcases. An exit in the northwest corner leads to the kitchen and, in a more northerly direction, to the entrance hall.³⁴

The living room is intended to be conducive to communication. It is presented in this description as being a pleasant space in which to meet and greet others, but it also an explicitly 'open' space, with many openings through which others might be assumed to be capable of looking in. Where there is no opening, interestingly, the description states that the walls are covered with books, perhaps setting the scene that this is after all a space not far removed from codex culture.

Instead of open architecture and infinite potential for associative linkages, the object-oriented domain thus closes over cyberspace into a narratively prescribed enclosure. These descriptions, which populate the virtual world with its objects and its avatars, constitute the parameters within which any 'story' can unfold, as Howard Rheingold asserted in his optimistic study of cyberspace and community in 1993: 'Everyone and everything and every place has a story. Every object in a MUD, from your character's identity to the chair your character is sitting in.'³⁵ Against Rheingold's optimism, in a host of subsequent critiques, the narrative construction of cyberspace has been seen as a field for the propagation of social stereotypes. For example, Lisa Nakamura argues that MUD and MOO discourse tends to fit avatars identified as Asian into 'familiar stereotypes from popular electronic media such as video games, television, film, and popular literary genres.'³⁶ The same could be said, I suggest, for every race, creed, or other social grouping in terms of their representation *qua* avatar, but it can also extend to every other kind of object in the object-oriented world. In this way, we may say, the object-oriented domain is by its nature oriented toward literary commonplaces.

³⁴ Daniel Punday, "The Narrative Construction of Cyberspace: Reading *Neuromancer*, Reading Cyberspace Debates," *College English* 63.2 (November 2000): 195.

³⁵ Howard Rheingold, *The Virtual Community: Homesteading on the Electronic Frontier* (Reading, Massachusetts: Addison-Wesley, 1993), 155.

³⁶ Lisa Nakamura, "Race In/For Cyberspace: Identity Tourism and Racial Passing on the Internet," *Works and Days* 25/26 (1995): 184.

It is this idea of the commonplace, I suggest, that ultimately shapes a sense of ‘place’ in virtual meeting spaces. Following this line of reasoning, we could point out that a narrative en-closure is also gendered en-closure, since space is always transformed into place through the filter of a gendered discourse. As Nedra Reynolds points out, paraphrasing Alison Blunt and Gillian Rose, regardless of whether women are ‘in public space or private homes, real or imagined communities ... their experiences ... are so geographically-rooted, they can vary with the floor plan – women can get angry in the kitchen, for example, but not in the bedroom.’³⁷ By the same token, we might say that the ‘living room’ is not a site in which the insertion of steak knives into the anus is seen as appropriately feminine conduct. Yet is it true that because gender is stereotyped on-line, then women users will be unable to function without fear of the ever present Bungles of the virtual world? I share Laura Miller’s view on this issue: ‘in accordance with the real-world understanding that women’s smaller, physically weaker bodies and lower social status make them subject to violation by men, there’s a troubling notion in the real and virtual worlds that women’s minds are also more vulnerable to invasion, degradation, and abuse.’³⁸

Classified as ‘rape,’ I suggest that the actions of Mr. Bungle were in themselves being fitted into a social stereotype that is based on a commonplace construction, and that a number of subsequent commentaries have sought to match Mr. Bungle’s crime to the criminal category of rape. By attaching to LambdaMOO a sense of its place within the architecture and history of the internet, I hope that we might see more deeply into the nature and scope of Mr. Bungle’s offence. Even if ‘rape’ seems like less than the right word for what the voodoo doll named Mr. Bungle did to the avatars named Starsinger and legba, other terms like ‘defamation’ or ‘offensive language’ may not quite cut the mustard either. The history of the internet enables us to situate LambdaMOO within a terrain altogether more coded as ‘textual’ than Dibble’s middlingly complex database accommodates. Yet this same history is necessary in order to show that the function of ‘sites’ in the internet is to facilitate narrative en-closure, which relies on concealment of the architecture of the internet. Quite simply, the full functionality of a MOO or a MUD, and possibly of web sites in general, is a triumph of technology rendered as the

³⁷ Nedra Reynolds, “Composition’s Imagined Geographies: The Politics of Space in the Frontier, City, and Cyberspace,” *College Composition and Communication* 50.1 (September 1998): 20.

³⁸ Laura Miller, “Women and Children First: Gender and the Settling of the Electronic Frontier,” in *Resisting the Virtual Life*, ed. James Brooks and Ian Boa, 56 (San Francisco: City Light Books, 1995).

illusion of the triumph of narrative and text over technology: the only apparent rise of Xanadu from the open architecture of ARPANET.

I suggest, then, that when the voodoo doll was unleashed on LambdaMOO one March night in 1993, it destroyed the narrative en-closure that the 'living room' provided for its users, exposing the shallow façade of subprogram #17 to its users. This was, in a sense, the act of the degenerate in reverse: rather than exposing himself to the eye of the unwitting beholder, Mr. Bungle exposed each user to her self. What I mean is that in addition to the obvious offence of a breach of 'civility' Mr. Bungle inadvertently exposed the fragility of the self as a narrative construct before the vast architecture of cyberspace. Thus exposed, the users confronted the progeny of Bush's memex, in a moment of revelation that the machinery for the augmentation of human memory also results in a fragmentation of the human self, an inevitable split of the user from the avatar. This split is held in abeyance by the narrativity of cyberspace, through which a sense of meeting-in-place takes form, until of course the voodoo doll appears in the room and shatters the illusion.

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