Cultural Formations in Text-Based Virtual Realities

By
Elizabeth Reid

emr@ee.mu.oz.au
emr@rmit.edu.au

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Abstract

Beginning with an understanding of virtual reality as an imaginative experience and thus a cultural construct rather than a technical construction, this thesis discusses cultural and social issues raised by interaction on 'MUDs', which are text-based virtual reality systems run on the international computer network known as the Internet. MUD usage forces users to deconstruct many of the cultural tools and understandings that form the basis of more conventional systems of interaction. Unable to rely on physical cues as a channel of meaning, users of MUDs have developed ways of substituting for or by-passing them, resulting in novel methods of textualising the non-verbal. The nature of the body and sexuality are problematised in these virtual environments, since the physical is never fixed and gender is a self-selected attribute. In coming to terms with these aspects of virtual interaction, new systems of significance have been developed by users, along with methods of enforcing that cultural hegemony through power structures dependant upon manipulation of the virtual environment. These new systems of meaning and social control define those who use MUDs as constituting a distinct cultural group.

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Preface

Parts of this thesis have been published in "Electronic Chat: Communication and Community on Internet Relay Chat" in *Media Information Australia* No. 67 (February 1993) 61-70. The previously published excerpts are spread throughout this thesis, and amount in total to approximately 2000 words.

Contents

Introduction:

Virtual Reality—Imagined Space

> Cyberspace.... A graphic representation of data abstracted from the 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...[1]

> Virtual Reality, or "cyberspace"... takes alternate reality a step further [beyond books and movies] by introducing a computer as mediator, or imagination enhancer.[2]

> Cyberspace: A new universe, a parallel universe created and sustained by the world's computers and communication lines... a new stage, a new and irresistible development in the elaboration of human culture and business under the sign of technology.3

Since William Gibson coined the term in his best-selling novel Neuromancer, 'cyberspace' and virtual reality have been part of late twentieth century culture, and have been infused with a variety of cultural and emotional meanings. Gibson himself envisaged a direct neural connection between humans and computers against a background of urban decay and personal alienation. The film The Lawnmower Man depicted a meld of mind-altering drugs and computer-controlled sensory stimulation which offered a new stage for the evolution of mankind, either toward godlike wisdom or satanic evil. The popular media have posed cyberspace as the new frontier and the new promise of the twentieth century. Gibson's 'console cowboys'—virtuoso cyberspace users hacking at the edges of the law—have been incarnated in media coverage of groups such as the infamous 'Legion of Doom'. Arcade games incorporating datagloves and headsets have become the latest fad in entertainment. Business Week filled its October 5 '92 issue with special features introducing virtual reality technologies and applications to its readers. Clifford Stoll's best-seller *The Cuckoo's Egg* promoted cyberspace as the site of new levels of international

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1 William Gibson, Neuromancer (London: Grafton Books, 1989) 67.
2 Nicholas Lavroff, Virtual Reality Playhouse (Corte Madera CA: Waite Group Press, 1992) 7.
3 Michael, Benedikt, *Cyberspace: First Steps* Cambridge, Massachusetts: The MIT Press, 1991) 1.

espionage, betrayal and tyranny, inhabited by glamorous foreign spies and dedicated heroes.

Technically speaking, the term ‘virtual reality’ is most commonly used to refer to systems that offer users visual, auditory and tactile information about an environment which exists as data in a computer system rather than as physical objects and locations. This is the virtual reality depicted in *The Lawnmower Man* and approximated by the ‘Virtuality’ arcade games marketed by Horizon Entertainment. This thesis is not about these kinds of virtual reality. I do not wish to talk about cyberspace or virtual reality as technological constructions but as cultural constructs. In common with Howard Rheingold I do not see virtual reality as a set of technologies, but as an experience.[4] More than that, I believe that it is primarily an imaginative rather than a sensory experience. I wish to shift the focus of attention away from the gadgets used to represent a virtual world, and concentrate on the nature of the user’s experience of such worlds. I contend that technical definitions of VR beg the question of what it is about such systems that sustains the illusion of reality in the mind of the user. A list of technical components does not explain why it is that users are prepared to accept a simulated world as a valid site for emotional and social response.

The systems that I will describe in examining virtual reality as a cultural environment are technically simple. I have chosen to refer to a family of computer programs known as MUDs. MUDs are networked, multi-participant, user-extensible systems which are most commonly found on the Internet, the international network that connects many thousands of educational, research and commercial institutions. Using a MUD does not require any of the paraphernalia commonly associated with virtual reality. There is no special hardware to sense the position and orientation of the user’s real-world body, and no special clothes allowing users to see the virtual world through goggles and touch it through ‘datagloves’. The MUD interface is entirely textual; all commands are typed in by the user and all feedback is displayed as text on a monitor. A simple PC can act as a gateway into this kind of virtual world.

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4 Howard Rheingold, *Virtual Reality*, (London: Mandarin, 1992) 46.

Instead of using sophisticated tools to see, touch and hear the virtual environment, users of MUD systems are presented with textual descriptions of virtual locations. Technically, a MUD software program consists of a database of 'rooms', 'exits', and other objects. The program accepts connections from users on a computer network, and provides each user with access to that database. As Pavel Curtis describes, users are presented with textual information describing them as being situated in an artificially constructed place which also contains those other participants who are connected to the MUD program.[5] There are many hundreds of MUD programs running on the Internet, each with its own unique database of descriptions of localities and objects. Within each of these systems users can interact with each other and with the virtual environment which the MUD presents to them.

As Curtis has commented, the virtual worlds within MUD systems have many of the social attributes of physical places, and many of the usual social mechanisms apply.[6] Users treat the worlds depicted by MUD programs as if they were real. However, it is not the technological interface itself that sustains the willingness of users to treat this simulated environment as if it were real. Rather it is the degree to which MUDs act not only as a tool for the expression of each user's imagination, but mediate between the users' imagination and their communication to others of what they have imagined. Cyberspace—the realm of electronic impulses and high-speed data highways where MUDs exist—may be a technological artefact, but virtual reality is a construct within the mind of a human being. Within this construct a representation of a person can be manipulated within a representation of a real or imagined environment, both of which can be manifested through the use of various technologies, including computers. Virtual worlds exist not in the technology used to represent them, nor purely in the mind of the user, but in the relationship between internal mental constructs and technologically generated representations of these constructs. The illusion of reality lies not in the machinery itself, but in the users' willingness to treat the manifestation of their imaginings as if they were real.

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5 Pavel Curtis, "Mudding: Social Phenomena in Text-Based Virtual Realities," *Intertek* Vol. 3.3 (Winter, 1992) 26.

6 Curtis, 26.

The technical attributes of these virtual places, comments Curtis, have significant effects on social phenomena, leading to new modes of interaction and new cultural formations.[7] The lack of actual physical presence, indeed the great physical distances between individual participants, demands that a new set of behavioural codes be invented if the participants in such systems are to make sense to one another. The problems posed by the lack of cultural cues which physical presence carries influence behaviour in virtual environments. The solutions to these problems which participants devise constitute the culture of the virtual world in which they are played out. It is the tension between the manifestation of conventional social and cultural patterns, the invention of new patterns, and the imaginative experience of these phenomena as taking part in a virtual world that is the subject of my thesis.

My primary sources in this work fall into three categories. Firstly, I will quote from logs taken of sessions on MUDs. Secondly, I will quote from electronic mail, or email, sent to me by MUD players in which they discuss such usage. Lastly, I will be using articles from the USENET newsgroups devoted to discussion of MUD and MUD playing. These groups include alt.mud, rec.games.mud, rec.games.mud.admin, rec.games.mud.announce, rec.games.mud.diku, rec.games.mud.lp, rec.games.mud.misc and rec.games.mud.tiny. I have been monitoring these groups since December 1991, during which time these groups have seen an average traffic of approximately fifty articles each day. In all quoted extracts the original (sometimes very original) grammar and spelling have been preserved, and in all cases I have secured permission to quote from the individuals concerned. In some cases I have been asked to withhold identifying information, and where this is the case I have indicated in the footnotes that the item of mail or the news article is from “anonymous”. However, in most cases the names of players and characters as well as the names of the MUDs themselves have been preserved. The most important exception is the case of ‘JennyMUSH’, which is an alias. For reasons that will be made clear in the body of this thesis, the unique nature of this system and the experiences of its users have led to a great concern with the issue of privacy. The

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[7] Curtis, 26.

administrator of the MUD has asked me not to reveal any information that might identify the location of the system, and has suggested 'JennyMUSH' as a pseudonym which retains the flavour of its actual name.

This thesis will be divided into three chapters, preceded by a section detailing the historical background to and context of the evolution of MUD systems. The subject of the first and second chapters is the nature of the social changes that these forms of virtual reality engender. I will examine the impact of MUDs on the practices of interpersonal communication and interaction, and on community formation and social cohesion. The third chapter will describe how the nature of human existence is altered by entrance or translation into virtual reality. In this last chapter I will explore the nature of social identity, sexuality and the body in the virtual environment.

Background:

A History of Interactive and Networked Computing and the Evolution of MUDs

Interactive Computing[8]

Personal computers are a relatively recent phenomenon. It is only within the last ten to twenty years that such machines have become common in the work place, let alone the home. The pre-history of computing was largely the domain of educational, governmental or commercial organisations which owned large mainframe computer systems. These huge old systems were jealousy protected; computer time was heavily booked and access available only to the privileged few. These computers of the past generation would hardly be recognisable to the present generation of Mac and PC users. The old beasts of the '50s and '60s took up literally rooms of space. Their computing power was measured not in millions of instructions per second—MIPS—but in hundreds of instructions. The multiple megabytes of random access memory we now take for granted in even the most humble of desktop systems were then only a fantastic dream. The greatest and most costly super-computers of the sixties counted their memory in kilobytes, hard and floppy disks were yet to be invented, monitors and keyboards were only in the experimental stages, and most computers received instructions and gave back results on long spools of punched paper tape.

Still, archaic as these clumping monsters now appear to be, they were the gleaming prize of their age. Mathematicians, statisticians, physicists, military engineers and

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8 The story presented in this chapter is based, unless otherwise noted, on information contained in Tracey L. Laquey, *The User's Directory of Computer Networks* (Massachusetts: Digital Press, 1990), Steven Levy, *Hackers: Heroes of the Computer Revolution* (New York: Dell, 1984), and Timothy Trainor and Diane Krasnewich, *Computers!* (New York: Mitchell, 1989), as well as on anecdotes related to me by some of the 'hackers' in the Computer Science Department and Electrical Engineering Faculty at Melbourne University. This history is by no means perfect—many of my sources, and the memories of the people who lived through these times, contradict each other. In writing this section I have tried to reconcile these differences and produce a narrative that accounts as far as possible for the differences amongst my sources.

government agencies all fought for the funding to acquire one of these miraculous new machines. They also attracted the interest of a new breed of young inquiring minds. At the Massachusetts Institute of Technology, one of the few educational institutions to invest large sums in the new computing technology, the members of the Tech Model Railroad Club switched their interest from the construction of intricate train tracks to the manipulation of complex computer circuits.[9] Of course these young students, most of them undergraduates, were not able to get direct access to the new machines. Instead they took to hanging around the computer rooms at midnight and the small hours of the mornings, begging computer time from the nightwatchmen on the few occasions when these least attractive hours had not been booked by others.

Most of the computers of the time relied on punched paper both to receive instructions and to communicate results. This forced computer programmers and users to divide the giving and receiving of data into discrete blocks. Instructions would be transcribed into the punched code useable by the computer, the instructions would be acted on by the computer and the results of its computations spat back on punched tape. These results would then have to be decoded before any further work could be done. MIT's academics—physicists and statisticians and mathematicians—relied on and accepted this paradigm of computer use. Not so the members of the Tech Model Railroad Club. Their interest quickly centred on an experimental computer which the Digital Equipment Corporation had loaned to the Institute. This computer was much less powerful than its hulking IBM cousins, and so was virtually ignored by the academics to whom it had been lent. It was adopted by the TMRC students because it offered a new paradigm of computing. DEC's Programmed Data Processor was among the first to incorporate a screen and a keyboard.

The TMRC members had no complex scientific problems to solve. Instead they spent their time simply exploring the capabilities of the PDP machine. They programmed to demonstrate their skill in understanding how the machine 'thought'. Staying up all night, and functioning, so the story goes, on a diet of coke and burgers, these young

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9 The Tech Model Railroad Club featured heavily in Levy, particularly in Chapter One.

'hackers' set out to colonise the unexplored territory of the computer. One of their most famous endeavours was the invention of the first computer game. By modern standards it was uncomplicated. A simple figure of a spaceship appeared on the screen, to be shot down by the player. At the time, however, it was a marvellous feat of computer graphics, a miracle of programming. Copies of 'Spacewar', in punched paper form, were passed around to computer enthusiasts at other institutions, and began a small revolution in computer use.[10]

The game of Spacewar depended on human/computer interactivity. It relied on the human user being able to monitor the computer's actions and modify and correct for them while the machine was actually operating. The concept of human/computer interaction did not begin with this invention of the computer game, but the game made a small instance of this interactivity available to a rapidly expanding number of computer users and demonstrated that such concepts could be realised in a simple and 'user-friendly' fashion. It brought new programming ideas—new algorithms—to the computing world. It also changed the way that the academy thought about computers. The leap between the idea of computers as awesome inhabitants of super-cooled rooms, tended by white-coated engineers, to the idea of the computer as toy and expressive tool, was made when that first spaceship was shot down. Spacewar made tangible the idea of the computer as a medium for human expression.

Networked Computing[11]

The computing expertise of the TMRC members soon came to the attention of MIT's authorities. Wishing to harness this obvious talent, MIT gave the students legitimate access to the computers, and legitimate work to perform on them. One of the first jobs they were assigned was to solve the problem of the costs involved in buying

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[10] The invention of Spacewar is detailed in Chapter Three of Levy.

[11] This history of computer networking and the Internet is based on: Philip Leverton and Ross Millward, *Technical note 82: Using the UNIX Mail System* (Melbourne: Melbourne University Computing Services, 1989); a USENET article on the history of UNIX written by Pierre Lewis (Newsgroup: comp.unix.questions, Subject: A very brief look at Unix history, From: "Pierre (P.) Lewis" <lew@bnr.ca> Date: Fri Jan 8 14:56:22 EST 1993); "The Strange History of the Internet," an article by Bruce Sterling published in the !mindgun 'zine produced by the Society for Digital Redistribution (originally published in the February 1993 issue of *The Magazine of Fantasy and Science Fiction);* and information in the works by Laquey and Levy detailed above.

enough computers to cater for the increasing numbers of people who wished to use them. MIT was considering investing in a new form of operating system, known as the Compatible Time-Sharing System, which would allow more than one person to use a computer at once. Instead, in a cost-saving move, they set the TMRC students to designing their own multi-user operating system. The multi-user computer system relied on a different hardware to the single user system. If more than one were to be accommodated, there needed to be more than one set of input and output devices connected to the computer. From each of these multiple terminals, different users could share the same computer resources. The system that they designed, and named the Incompatible Timesharing System, was one of the first of this new breed of operating system. ITS and other systems like it quickly supplanted the old single-user systems. Today, the most popular multi-user operating systems are part of the UNIX family, descendants of a system which Bell Laboratories began to develop in 1969.

The multi-user paradigm quickly became popular, as its cost-effectiveness became apparent, and was followed by the idea of the computer network. Programmers in the United States Department of Defence built the first network. In 1969 the DoD began work on a ‘long-haul’ network of computers at dispersed sites. This project was funded by the Advanced Research Projects Agency, a research arm of the DoD. The original purpose of the ARPANET project was to design a system for use by military control and intelligence. The network was designed to enable authorities to communicate and weapons to be controlled remotely in the event of a nuclear war. The problem with which the engineers who designed the system were faced was that during a war any central control point would most likely be the target of enemy missiles. The solution was a network structure that had no central point and which was designed from the beginning to withstand physical attack. Each node of the network could operate as a central point, and there would be no ‘right’ way for a message to be directed from one node to another. Messages could follow any route, and should one node be taken out of operation, messages would simply skirt around it. This rather haphazard delivery system would be extremely resilient—even with large portions of the network knocked out, information could still be transmitted.[12]

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[12] This paragraph is based on information contained in Sterling.

In 1969 ARPA set about installing the first node of the network at the Los Angeles campus of the University of California. Shortly afterward nodes were installed at the Santa Barbara campus of the same university, at the University of Utah, and at the Stanford Research Institute. Once the system was up and running, these universities were given leave to use it for research purposes. They jumped to do so, planning to exploit the network's ability to give users of the computers at each of these sites access to the resources held by all three. At the same time, DARPA encouraged other institutions to set up their own network nodes, each of which could be commandeered in time of war. By 1972 thirty-seven universities and government research organisations were on ARPANET, and as the network grew these institutions began to demand autonomy from the military. In 1983 ARPANET was divided into two networks, known as ARPANET (for research use) and MILNET (for military use). The ARPANET arm continued to expand, with local area networks at various government, educational and commercial sites being added to the system. Other nations also adopted the technology, and with the advent of satellite communications, it became possible for all these computer networks to be linked together as one super network. This new international entity became known as the Internet.

Interactive Networking[13]

In its original design, ARPANET was intended to facilitate the use of remote computers, and the transfer of computer programs and data between remote computers. As something of an afterthought, a tool for interpersonal communication was provided—electronic mail. By the second year of operation, it became clear to ARPANET's designers that, despite their expectations, most of the network's users were not using it to share facilities but to share information. File transfers took up a much greater portion of network traffic than did remote computing, and although it accounted for only a small amount of network traffic, writing and reading electronic mail took up most of the time which users spent on the network. People were using the network to collaborate on projects, to trade notes, and just to chat and keep in

[13] Information on the early development of USENET has been taken from articles by Gene Spafford and Brian Reid which are regularly posted to the USENET group news.answers.

touch. Less than a year after ARPANET became operational, the mailing list was invented. This allowed people to send messages to a single site, where a program would then forward that message on to every person on a list, so facilitating communication between a large group of people. One of the earliest and most popular mailing lists was named SF-LOVERS, and was used by science-fiction fans.

Since then, many more communications facilities have become available on the network which ARPANET became: the Internet. The most popular of these is USENET, which came into being in 1979, the invention of three students at the University of North Carolina who wanted to design a better system for disseminating information between multiple people than email and mailing lists provided. USENET software enabled people to read messages stored in a network distributed database of messages divided by subject, and to add their own articles to the database. In its original incarnation, the USENET software was designed to handle a few articles per day from each of a handful of subject divisions, or, as they came to be known, ‘newsgroups’. In the last fourteen years, USENET has come to encompass over two thousand newsgroups, with many of those groups seeing several hundreds of articles each day. Today’s USENET software relies on a hierarchical arrangement of newsgroups. The ‘top-level’ hierarchies have such names as ‘comp’, ‘talk’ and ‘rec’ (the latter being for recreational topics). Beneath these blanket divisions are such groups as comp.os.msdos, comp.os.unix, rec.fishing, sci.anthropology, sci.electronics, rec.juggling and rec.food.vegetarian. Almost every site on the Internet allows its users to access USENET, and the articles that each user posts are very quickly sent on to other sites. Where once it might have taken days for messages to be propagated, it now takes only minutes.

Despite this speed of transmission, electronic mail, mailing lists and USENET are nevertheless asynchronous methods of communication. Messages are read and responded to in discrete blocks, in a communicative paradigm similar to that on which the earliest computers were based. Early on in the Internet’s life, a simple synchronous method of communication was developed. Variously known as ‘phone’ or ‘talk’, this facility allowed a user to ‘call’ another user. If that user decided to accept the call, the two users could type directly to each other's screens, allowing a far faster and more interactive form of communication than that allowed by email or newsgroups. 'Talk' programs suggested a new way of figuring computer-mediated communication. Where asynchronous methods of CMC such as email or USENET tend to rely on the idea of a computer as a tool, as a means for communication, synchronous methods rely on the idea of the computer as providing a space for communication. The talk program took the ideas begun by Spacewar further. Talk presented computers, and computer networks, not only as a medium for activity, but as the site of it. Synchronous forms of CMC began to bring the cyberspace of the Internet into the realms of virtual reality. Nominally, all datapaths can be called cyberspaces. Telephone lines, hard disks, fibre optic cables and satellite links are all parts of the global cyberspace that is the Internet. Where that cyberspace becomes most tangible to the user, and where it becomes a form of virtual reality, is where the users of those networks can imaginatively enter into them. It was this imagined entrance into virtual space that was to be developed in MUDs.

MUDs: Networked, Interactive Virtual Realities[14]

The computer aficionados at the Stanford Artificial Intelligence Laboratory of the early 1970s were well known for being fantasy fans. Rooms in the AI Lab were named after locations described in J.R.R. Tolkien's *Lord of the Rings*, and the printer in the lab was rigged so that it could print in three different Elven fonts. It was one of these fantasy fans who wrote the first virtual reality computer game. Donald Woods, a veteran of MIT's Spacewar, discovered a quite different kind of game being run on a computer at the Xerox corporation's Palo Alto Research Centre. The program depicted an explorer seeking treasure in a network of caverns. It was an entirely text-based game. There were no spaceships to be shot, no graphics at all, just descriptions of localities and prompts asking players where they wished to go or what they wanted to do next. Woods was entranced by the game. He contacted the programmer, Will

[14] My sources for this history include first-hand accounts related to me in electronic mail by Richard Bartle, Alan Klietz, Alan Cox, Jim Aspnes and Jim Finnis, information included in Levy (especially Chapters Three and Seven), user documentation included with the AberMUD, TinyMUD and LPMUD programs, and postings made to the Usenet newsgroup rec.games.mud in response to a query from Amy Bruckman.

Crowther, talked to him about it, and decided to expand Crowther's program into a more complex adventure game. What he wrote was ADVENT, more commonly referred to as Adventure, in which a player assumed the role of a traveller in a Tolkienesque setting, fighting off enemies, overcoming obstacles through clever tricks, and eventually discovering treasure.

Adventure players were presented with text describing scenes such as the following:

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You are standing at the end of a road before a small
building.  Around you is a forest.  A small stream flows
out of the building and down a gully.  There is a sword
beneath a tree next to the stream.15
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Simple commands, such as 'get sword', 'look tree' and 'go north', allowed the player to navigate and interact with the Adventure universe, with each input item eliciting a new description of the player's environment or of the results of his or her actions. Crowther and Woods were the inventors of the very first computerised virtual reality game. Crowther's caves, and Woods' more complex fantasy world, were figured by players as places which they could enter through the computer.[16]

Simple though it may seem, Adventure quickly became extremely popular, and a host of similar games began to appear. Copies of these games spread through the international tendrils of the Internet, where they can be found today, played by countless numbers of computer users. The charm of the game lay in the illusion it gave players of being inside the game universe. It engaged the imagination in a way that no game had done before. Unlike the commercial computer games which were then starting to be written, the game had no definite aim. Players were not called upon to solve specific problems, or defeat specific enemies. There were no Pacmen or spaceships, no laser weapons or gobbling globs. Instead players were free simply to explore the game universe. They could do whatever they liked. Users could in their imagination enter into the game universe, and do in it exactly what they would do were the virtual reality an actuality. Adventure offered a form of escapism that no

[15] Levy, 141.
[16] See Levy, 138-144 for more details on the invention of Adventure.

computer game previously had by allowing the user to enter the game universe and plot the form the game would take.

Adventure and its cousins did not run on computer networks. They were single player games. However, at the same time as they were being written, most US universities were, as I have described, joining the ARPANET. By the late 1970s most research institutions in the United States had joined the ARPANET. In 1977 the interests of networking, interactivity, and virtual reality games met to produce the first networked, multi-user game. Mazewar, written by Jim Guyton, involved the extremely simple scenario of multiple participants wandering around a maze, trying to shoot one another—a kind of multi-participant Spacewar. Mazewar was soon followed by a more complex multi-user game which owed its setting to that depicted in Adventure. WIZARD featured a dungeon, and puzzles and monsters. Players roamed the WIZARD universe killing dragons and collecting gold. Moreover, they could do it in teams. WIZARD introduced the concept of player interaction beyond the level of aggression. Players of WIZARD could communicate with one another, and could share information and objects they had accumulated in their exploration of the dungeon. Teams of players could collaborate on adventures which were often lifted wholesale from the pages of pulp fantasy novels, if not from *The Lord of the Rings*.

In 1979 Alan Klietz, inspired by Adventure and WIZARD, began writing E*M*P*I*R*E, which later came to be known as Scepter. Klietz was associated with the Minnesota Educational Computer Consortium, a group which from 1976 to 1983 made use the of the new multi-user 'time-sharing' computer operating systems to provide computer access to schoolchildren. One of the most popular programs on the system was Adventure, and Klietz wrote Scepter as a multi-user alternative to Adventure. Scepter allowed players, as WIZARD had, to communicate, and it also adopted that feature of Mazewar that was to become one of the major features of this genre of game. Scepter allowed players to play against each other as well as with each other. Player to player combat introduced a new level of complexity into the game, which quickly became so popular that Klietz set about writing a commercial version, known as Screenplay, under the ownership of his employers, Gambit Incorporated.

Scepter was the first game to depart from the fantasy genre that had dominated previous games. Alan Klietz's game universe featured various themes including areas emulating the wild west, and science fiction and detective stories, as well as the more familiar Tolkienesque areas. The latter remained popular, and the science fiction areas quickly collected an avid group of fans. To this day the fantasy and science fiction genres dominate these games, just as in the forms of Spacewar and Adventure they had inspired their birth. Unfortunately, Klietz was eventually forced to abandon his work. The company that originally owned the rights to Screenplay, Gambit, was subsumed into a larger company, Interplay. Interplay later filed for bankruptcy and its owner was sent to jail on eighteen counts including tax evasion and running a false church out of his home.[17] Screenplay left the market under a cloud.

The name 'MUD' first appeared in 1978 when Roy Trubshaw, then a student at the University of Essex, England, wrote what he called a Multi-User Dungeon. The name itself was a tribute to an earlier single-user Adventure-style game named DUNGEN.[18] In 1979, Richard Bartle joined Trubshaw in working on MUD. MUD contained many of the features which others, such as Alan Klietz, had developed independently. It was a networked multi-user game which allowed users to communicate with one another, to cooperate on adventures together, or to fight against each other. In an early version of the game, players were also given the option of extending the game world by creating new objects and places within it. However, in the end, the option of user-extensibility was taken out, partly as a result of the lack of computing resources available to run the game, and partly because Bartle felt that the hodge-podge of items created by players detracted from rather than enhanced the game.

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[17] This anecdote has been taken from a USENET article with the following headers: From: alberti@mudhoney.micro.umn.edu (Albatross); Newsgroups: rec.games.mud; Subject: Re: history: VMS Monster, Sceptre of Goth; Date: 23 Mar 92 22:01:55 GMT.

[18] The operating system under which DUNGEN ran only allowed filenames to be a maximum of six letters long, thus the particular spelling of the name.

The first MUD universe was a fantasy-style one that encouraged players to compete with each other for points. Player went on quests to kill monsters or find treasure. Killing monsters—or other players—was a source of points, but more were to be gained by finding treasure and bringing it back to a swamp located at a shifting point in the game universe. On throwing treasure into the swamp, players would be rewarded with points which, once they had collected enough, would enable them to gain new and greater powers. Although this original MUD game did not ever gain a high level of popularity, it nevertheless has had great influence on those who were to develop later games. The number of people who played Bartle and Trubshaw's MUD was small, but many of them went on to design the systems that are popular today. The original MUD game can still be played. Richard Bartle was asked to design a version for the CompuServe computer facility, and that version is still in existence. Called British Legends, players compete to collect enough points, by solving puzzles, killing monsters and finding treasure, to become a 'Wizard', a title recognising the player's mastery over the British Legends universe, and giving him or her special powers within that universe.

Alan Cox was one of those who spent a lot of time playing the original MUD game, and in 1987 he decided to design his own. AberMUD, named for the town of Aberystwyth in which Cox lived, has evolved through numerous versions and is still played today. Jim Aspnes of Carnegie-Mellon University was another fan of Bartle and Trubshaw's MUD. In 1989 he began work on TinyMUD, which was to introduce a whole new flavour of game to the genre. TinyMUD was designed to run on computers running the UNIX operating system, and the growing popularity of UNIX made possible the popularity of Aspnes' creation. TinyMUD was the first of what were to come to be called 'social' MUDs. Aspnes deliberately set out to get away from the notion that these games had to be played with the idea of gaining points, or killing things—let alone that players should be given the option of killing each other. Instead of being given access to commands such as 'kill', TinyMUD players were encouraged to centre their play around communication and world creation. Although none of the features of TinyMUD were new to the growing MUD genre, it was the first system to combine them in a fashion that stressed cooperation and interaction rather than competition and mastery.

From 1990 onward the number of MUD programs in circulation increased rapidly. There are, among others, COOLMUDs, ColdMUDs, DikuMUDs, DUMs, LP-MUDs, MAGEs, MOOs, MUCKs, MUSEs, MUSHes, TeenyMUDs, TinyMUDs, UberMUDs, UnterMUDs, UriMUDs and YAMUDs (the latter being an acronym for ‘yet another MUD’). Each program offers its own technical advantages and disadvantages, such as the amount of computer hard disk space or memory needed to run the program. The environments portrayed on MUDs have become far more varied. The Tolkienesque fantasy worlds are still the most common, closely followed by science fiction worlds, but MUD environments based on actual or historical places—such as Moscow, the ante-bellum South, the Wild West, the prehistoric era, or a medieval village—have appeared. The meaning of the term ‘MUD’ has changed to reflect this. The original acronym ‘Multi-User Dungeon’ has been joined by ‘Multi-User Dimension’ and ‘Multi-User Domain’, and the term has come to refer not to the original program written by Richard Bartle and Roy Trubshaw but to the entire program genre.[19] Many of today’s MUD systems are not games, but are being used for academic purposes. The first of these academic systems was MediaMOO, run by Amy Bruckman of the Massachusetts Institute of Technology, which provides a virtual meeting place for students and academics working in the area of media and communications. Several more such systems have followed in MediaMOO’s steps, including PMCMOO, which serves literary and cultural theorists, and BioMOO, which serves biologists.[20] These systems use the virtual environments created by MUD programs to collapse the distances between academics from around the world, and to provide materials such as course outlines, papers and conference information in an easily accessed form.

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[19] Some would insist that MUD has come to stand for Multi Undergraduate Destroyer, in recognition of the number of students who may have failed their classes due to too much time spent MUDding.

[20] PMCMOO is an off-shoot of the electronic journal *Postmodern Culture*.

Nevertheless, the majority of MUD systems run on the Internet are intended to be used for social or entertainment purposes, and it is these systems with which I am concerned. These MUDs tend to fall into one of two categories, commonly referred to by MUD players as ‘adventure’ and ‘social’ MUDs. The first category—the adventure-style MUDs—refers to MUD programs that descended directly from Bartle and Trubshaw’s MUD; the second—the social MUDs—refers to systems that were inspired by TinyMUD. Whether a particular MUD program belongs in either category is dependant not purely on any technical considerations of its programming or implementation, but on the style of play which it encourages.

On adventure-style MUDs, such as those based on the LPMUD and DikuMUD programs, there exists a strict hierarchy of privileges. The person with the most control over the system is the one running the MUD program. He, or she, has access to every computer file in the program, and can modify any of them. This person is commonly known as the God of the MUD, and he or she has complete control over the elements of the virtual world. Gods may create or destroy virtual areas and objects, and destroy or protect players’ characters. The players, on the other hand, have very little control over the system. They cannot cannot build new objects or areas, and have no power over those that already exist. They can only interact with the MUD environment. They can kill monsters, collect treasure and solve puzzles, and communicate with one another. By doing these things players on adventure MUDs gain points, and once a player has a certain number of points they gain certain privileges. Once a player has collected enough points he or she may be elevated to the rank of Wizard.[21] Wizards do not have the complete degree of control which is available to the God of the MUD. They cannot alter the MUD software itself, but they do have the ability to create and control objects and places within the MUD universe.

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[21] The titles given to those who run and administrate the MUD vary from system to system. Since they are by far the most commonly used of all titles, I have chosen to use the term ‘God’ to refer to the person running the MUD program, and ‘Wizard’ to refer to those players who have been given administrative powers by the God.

Social MUDs, many of which are based on the MUSH or MUCK software, are not so evidently hierarchical. Early versions of Bartle and Trubshaw's MUD allowed players to add items and rooms to the game database, an idea that was incorporated into the TinyMUD program. This feature is common to all social MUDs. While social MUDs have Gods as do adventure MUDs, who control the actual software, and Wizards who have privileged powers, these powers in the game universe are not unique in kind but only in degree. Players do not have to fight to gain points and levels before they can build simple objects and create new areas of the game universe. Novice players on a social MUD are able to do these things. They do not have access to the actual computer files of the game program, but they have access to a library of commands that allow them to create and describe objects and areas, and make them behave in certain ways in response to input from other players. The rank of Wizard is not dependant upon gaining points, and elevation to this rank is at the discretion of the Gods. Players of these MUDs are, as were the original players of TinyMUD, encouraged to interact with and extend the virtual environment rather than compete within it.

In this thesis I have chosen to concentrate on four MUDs representing four different environments and the two different styles of MUD, although I shall refer briefly to other systems. These four MUDs are known as LambdaMOO, FurryMUCK, Revenge of the End of the Line and JennyMUSH.[22] The first is a social-style MUD, set in a rambling mansion. The second, also a social MUD, involves players in a world in which each individual adopts the persona of an anthropomorphised animal. Revenge of the End of the Line (or EOTL as its players refer to it) is an adventure-style MUD, and JennyMUSH is a social MUD used as a virtual support centre by survivors of sexual assault. I have chosen to concentrate on these MUDs because each lends itself to a discussion of virtual reality from a different perspective. LambdaMOO, which of the three most nearly attempts to recreate reality inside

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[22] These MUDs may be connected to from any computer on the Internet by using the 'telnet' command or program. The Internet address for LambdaMOO is lambda.parc.xerox.com (or 192.216.54.2) and the port number is 8888. The address for FurryMUCK is sncils.snc.edu (138.74.0.10), port number 8888. Revenge of the End of the Line can be found at mud.stanford.edu (36.21.0.99), port 2010. JennyMUSH's administrator has asked me to withhold information on how to connect to that MUD.

virtuality—the core of the LambdaMOO mansion is a virtual recreation of the God's actual home—provides an insight into changed communicative and cultural practices. EOTL, with its competitive and hierarchical structures, shows the evolution of power and social control in cyberspatial environments, as does a painful episode on JennyMUSH. FurryMUCK, with its emphasis on anthropomorphic characters lends itself to an exploration of the fate of the human body and human identity inside virtual realities.

Chapter One:

Communication and Cultural Context

For words to have a shared meaning they must be given a context. Stripped of the historical, environmental and social contexts in which they have evolved and in which they are used, words have little meaning. It is context that creates meaning and allows us to act. The information on which we decide which aspects of our systems of social conduct are appropriate to our circumstances lie in cultural contexts rather than in the shape and sound of words alone. In interacting with other people, we rely on non-verbal information to delineate a context for our own contributions. “Being cultured,” says Greg Dening, “we are experts in our semiotics... we read sign and symbol [and] codify a thousand words in a gesture”.[23] We do not need to be told that we are at a wedding, and should be quiet during the ceremony, in order to enact the code of etiquette that our culture reserves for such an occasion. Words alone do not express or define the full extent of our cultural and interpersonal play. The greater part of our interaction is expressed through signs and symbols—in tone and nuance, in styles of dress and handwriting, in postures and facial expressions, in appeals to rules and traditions. The words themselves tell only half the story—it is their presentation that completes the picture.

Human communication is never merely a matter of words, much less so is human culture. This is something that we all take for granted—yet the virtual environments that are the subject of this study are a product of words, of pure text. Because of this, these virtual places subvert many of our assumptions about the practice of interactive communication. MUD players are unable to rely on conventions of gesture and nuances of tone to make sense of one another. Nevertheless, despite the absence of these familiar channels of interpersonal meaning, players do not fail to make sense of each other. On the contrary, MUD environments are extremely culturally rich, and

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[23] Greg Dening, *The Bounty: An Ethnographic History (*Melbourne: Melbourne University Press, 1988) 102.

communication between MUD players is often highly emotionally charged. Although they cannot see, hear or touch one another, MUD players have developed ways to convey shades of expression that would usually be transmitted through these senses. Their means of expression are severely limited by the technology on which MUDs are based, but instead of allowing that to restrict the content of their communication they have devised methods of incorporating socio-emotional context cues into pure text. They use text, seemingly such a restrictive medium, to make up for what they lack in physical presence. On MUDs, social presence is divorced from physical presence, a phenomenon that refutes many of the assumptions that have in the past been made about the ideal richness of face-to-face interaction. On MUDs, text replaces gesture, and even becomes gestural itself.

MUDs show none of the four distinctive features Kiesler, Siegel and McGuire have described computer-mediated communication as having: an absence of regulating feedback, dramaturgical weakness, few social status cues and social anonymity.[24] Despite being textually based, MUDs are sites for social interaction and cultural meaning. The virtual worlds created with MUD software are dramaturgically and socially rich, and MUD players have been able to devise means of communicating social context cues through the textual medium. The subject of this first chapter is the methods which MUD systems and MUD players use to provide themselves with a social context and a social presence.

Making Sense of the World

Each MUD system begins as a blank space. It is nothing more than a set of commands and possibilities. A MUD program is, in essence, a set of tools that can be used to create a socio-cultural environment. It is this that sets MUDs apart from other textually based computer-mediated communication tools. The latter merely provide an interface that separates what one person types from that of another, and so allows a form of written conversation. MUDs, by contrast, allow the depiction of a physical environment which can be laden with cultural and communicative meaning.

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[24] Sara Kiesler, Jane Siegel, and Timothy W. Mcguire, "Social psychological aspects of computer-mediated communication," *American Psychologist* Vol. 39 No. 10 (October 1984): 1125.

They allow imagination and creativity to furnish the void of cyberspace with socially significant indicators. It is this that makes a MUD system a form of virtual reality. The first step in the use of a MUD program is the creation of a MUD world and the peopling of it. Those setting up the program must act as their titles suggest, as Gods and Wizards. They must create the universe—they must, to invoke a MUD command, '@create light.'

The basic MUD program, whether MUSH or LPMUD or any other variety, consists of a number of tools and commands to be used to create a database of textually described 'objects', as they are called. The objects created are symbolically linked—in both the technical and the cultural sense—to create the textual illusion of a world. Database entries representing spaces are linked together such that one can be accessed from the other by using a command such as 'out' or 'north'. Entries representing things such as chairs or swords or spaceships are placed within these virtual spaces, and given properties that allow them to be manipulated by players. Lastly, entries representing the players themselves are set free to roam and interact with these spaces and things, and often to create more of them.

Together, these three types of objects—places, things and people—make up the context that the MUD community operates within. As Kiesler, Siegel, and McGuire have suggested, the chief problem faced by electronic interlocutors is the "dramaturgical weakness of electronic media".[25] To compensate for this lack in the medium, players must become actors and must provide their own scenery. Imagination must take the place of physical reality, and must be manifested in forms accessible to players on the system. Each object in the MUD universe—each person, each place, each thing—can be given a description by its creator. This description can be as simple or as complex as the creator wishes, and can be viewed by every other player by use of the 'look' command. When a player connects to a MUD through the computer network, he or she is immediately provided with a textual manifestation of the MUD's virtual environment. On LambdaMOO, the player will seem to enter the coat closet in the sprawling house which is at the core of the LambdaMOO world:

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[25] Kiesler et al, 1125.

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The Coat Closet
  The closet is a dark, cramped space.  It appears to be
very crowded in here; you keep bumping into what feels
like coats, boots, and other people (apparently
sleeping).  One useful thing that you've discovered in
your bumbling about is a metal doorknob set at waist
level into what might be a door.
  Don't forget to take a look at the newspaper.  Type
'news' to see it.
  Type '@tutorial' for an introduction to basic MOOing.
Please read and  understand 'help manners' before
leaving The Coat Closet.
```

This coat closet is a remarkable place. It may be small and cramped, but it provides an initial point of reference in the LambdaMOO world and it furnishes the newcomer with a host of information about the cultural nature of the world he or she has entered. Most if not all MUDs are provided with such an anteroom. It is often a cramped, dark place, and rarely an open space containing a great many objects to distract or disorient the newcomer. Closets, cracks under bandstands, teleportation rooms and hotel hallways—to suggest just a few of the anterooms on a few of the MUDs I have visited—might not seem especially inviting places in the actual world, but on textually represented virtual worlds they provide a space in which players may become accustomed to the virtual environment. These spaces are sparsely furnished; they do not overload the newcomer with information. At the same time they provide the reassurance of others' virtual presence, most often in the form of sleeping bodies, and they allow the player to take a virtual breath before stepping out into the main area of the virtual landscape. Most importantly, many MUD anterooms contain pointers to helpful information and rules. LambdaMOO novices are directed to a newspaper, which will tell them about recent events on the MUD, a tutorial, which will tell them how to interact with the virtual universe on a technical level, and some advice on etiquette, which will tell them how they should interact socially on LambdaMOO.

Once ready, LambdaMOO newcomers may decide to open the closet door and venture into the greater part of the virtual world. They will then find themselves in the living room:

```
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 fireplace.  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.  The door into the coat closet is at the north end
of the east wall, and at the south end is a sliding
glass door leading out onto a wooden deck.  There are
two sets of couches, one clustered around the fireplace
and one with a view out the windows.
  You see Cockatoo, README for New MOOers, a fireplace,
a newspaper, Welcome Poster, LambdaMOO Takes A New
Direction, The Daily Whale, a map of LambdaHouse, The
Carpet, The Birthday Machine, lag meter, and Helpful
Person Finder here.
  Guinevere, jane, MadHatter, Fred, Obvious, Alex, jean-
luc, tureshta, Bullet_the_Blue, Daneel, KingSolomon,
lena, Laurel, petrify, Ginger, and Groo are here.[26]
```

The importance of anterooms on MUDs becomes clearer in the light of the quantity of information which entrance into more dynamic areas elicits. The LambdaMOO living room is a social and virtually physical nexus. From this point players of the system may enter an ever increasing number of virtual places. The main body of the living room's description details the places that can be visited from that room. Having come this far, most novice players are provided with a strong sense of physical context, which provides a sense of the conceptual limitations and possibilities of the virtual world. Physical context is a dimension of social context; place and time are as much loaded with cultural meaning as are dress and gesture. LambdaMOO provides the place, and makes it non-threatening and comfortable. With fireplaces and couches, books, sunlight, fresh air and pool-side views, the LambdaMOO house is definitely a desirable residence. It is a place to relax and chat, and that is exactly what people do in it.

Along with virtually physical centrality, the living room provides social centrality. It is the main meeting place for LambdaMOO inhabitants. It is quite likely the first port of call for newcomers seeking to find a social niche in the virtual setting. From LambdaMOO's beginning, the living room was presented in such a way as to offer a

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[26] This list of player names was generated by asking a group of people who happened to be logged on to LambdaMOO on 5th November 1993 to volunteer some names which they had used on a MUD.

sense of social orientation to newcomers. Fixtures in the room included a simple map of the main areas of the ever-growing LambdaHouse, a welcome poster and a device enabling the newcomer to get in touch with players designated as 'Helpful People' willing to answer questions and provide aid to the confused. As LambdaMOO has evolved, its denizens have added to this list of fixtures. The more popular additions have included a device for registering one's birthdate and finding out the birthdates of other players, as well as the LambdaMOO newspapers, which are commonly filled with social notes, gossip, announcements and opinions. All of these objects, and the functions they perform, create LambdaMOO as a space held together by interpersonal sociality. Birthdays are remembered and commemorated. Help is easy to find, and clearly advertised. All newcomers are offered a welcome, and the day-to-day social lives of LambdaMOO denizens are reported and commented upon.

I have been unable to find a MUD that does not provide the player with both an anteroom and a central social nexus point, each room containing information about the physical and social context of the MUD. The nature of that context differs widely between MUDs. Some, such as LambdaMOO, give an impression of warmth and friendliness. Others might be competitive and dangerous, or might offer and adventure and challenge. The information transmitted differs, but not the method of transmission. MUDs create their own context out of words. The cues normally associated with sight and sound and touch are provided through description. The information with which newcomers are met allows them imaginatively to place themselves within the virtual world, and encourages them to treat these textual cues as if they were real. This information provides a common basis for interaction between players.

Making Sense of Each Other

The MUD system provides players with a stage, but it does not provide them with a script. Players choose their own actions within the context created by the MUD universe. They are not technically dictated to by the MUD, but are instead given tools which enable them to act and speak virtually. Interaction on social-style MUDs such as LambdaMOO is carried out through the use of five commands known as 'say', 'pose', 'whisper', 'page' and 'page-pose'.[27] Each of these commands allows communicative information to be channelled in different ways. The 'say', 'pose' and 'whisper' commands are used between players in the same virtual space. If a player in the living room, who might be called Fred, types 'say Hi there!' then all the players in the living room will see that:

```
Fred says, "Hi there!"
```

If Fred then types, 'pose grins amiably' then all those in the room will see:

```
Fred grins amiably.
```

The pose command can also be used to mix actions and utterances together.[28] If Fred were to type, 'pose hugs Ginger warmly and says, "It's great to see you again!" ' those in the living room, including a character named Ginger, would see:

```
Fred hugs Ginger warmly and says, "It's great to see you
again!"
```

If, however, Fred wished to communicate only with Ginger, he might choose to use the whisper command. Typing 'whisper Hi there! to Ginger' will cause Ginger, and only Ginger, to receive the following:

```
Fred whispers, "Hi there!" to you.
```

Even if Ginger were not in the same virtual room as Fred, he could still communicate with her. The page and page-pose commands allow the same function as do say and

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[27] Some systems offer further commands on top of those I have listed, and the results of those which I have described may differ from system to system. I have chosen to describe the five most common commands in their most common formats.

[28] The pose command, also known as the emote or act command, seem to have been invented independently by the players and developers of several different MUD programs. SHADE, an early variation on Bartle and Trubshaw's MUD, was probably the first game to include this command. Jim Finnis wrote a pose command for AberMUD in 1987, and Jim Aspnes implemented for TinyMUD a variety of pose that his players had thought up in 1989. That several groups of MUD players and developers each invented a pose-style command says a great deal for the importance of such a means of expression in these virtual worlds. More details can be found in Appendix 4.

pose but allow messages or virtual actions to be sent to players in other virtual rooms. The results of these commands appear this way:

```
Fred pages, "Hi there!" to you.
```

and

```
In a page-pose to you, Fred grins amiably.
```

Described baldly, this suite of commands seems simplistic. They are, however, the tools with which social presence is formed on MUDs and through which social interaction is made possible. They may be simple, but they are immensely flexible. Players can say, whisper or page whatever they choose to, and may pose or page-pose any action they wish to take. There is no technical limit to what can be expressed, although as I shall describe later, conventions have arisen on MUDs which delimit the acceptability of various kinds and subjects of communication.

By contrast, players of adventure style MUDs, while having access to commands such as whisper and page, are able to emote only in tightly controlled circumstances. The actions taken by players on adventure MUDs form part of a never-ending narrative, a story in which enemies are killed, and treasure and power are won. Actions are taken not only within a social context but within the context of the MUD's narrative. To allow players to pose such lines as 'Ginger wields a sword of Ultimate Destruction,' or, 'Fred gives you 1000 gold coins,' would destroy the integrity of that narrative. It is only in special places in the MUD world, commonly known as 'emote rooms', that players of adventure systems are able to use emote commands; elsewhere they are given access to a suite of commands that enable specific actions. Thus, for instance, on Revenge of the End of the Line, if Fred were to type 'french Ginger', Ginger would see:

```
Fred gives you a deep and passionate kiss...
It seems to take forever...
```

Adventure MUD systems commonly provide players with several hundreds of these commands, typically divided into verb and adverb categories. By combining words from each category players are able to express actions and feelings, an exercise that demands skill and memory. Though less versatile than the free poses allowed players of social MUDs, verb and adverb commands are heavily used. Thomas Gerstner, who is associated with an adventure-style MUD named ‘Nemesis’, recently circulated the results of a tally showing how many times each command was used. Over a period of 250 days, and with an average of twenty players connected at all times, players on Nemesis invoked a ‘feeling’ command every thirty seconds. The most popular commands were:

Verbs:

smile	89089	bow	50138	shake	46312
greet	46152	grin	46046	nod	42385
laugh	34063	wave	30875	giggle	20145
sigh	19222	hug	19220	wait	13550
kiss	12212	shrug	10849	kick	9504
poke	9307	chuckle	7401	french	6773

Adverbs:

happily	5057	demonically	3763	evilly	3662
sadly	2027	smilingly	1864	deeply	1458
passionately	1143	knowingly	1119	insanely	1096
erotically	950	inanely	926	warmly	905
loudly	891	friendly	834	lovingly	797[29]

As can be seen, the vast majority of the virtual actions taken are those which might be expected to invoke and sustain social meaning between players. The average Nemesis player smiles at his or her fellows eighteen times a day, and hugs them four times a day. These commands steer players toward the creation of social contexts and the formation of social networks. The actions which players may take, and the emotions they may express, are delimited by the commands available to them; yet at the same time these commands suggest to players the emotional and social possibilities open to them.

It is tempting to draw parallels between MUDs and novels or plays. The results of the pose, say and feeling commands cause interaction between players to resemble these literary forms superficially, and the social dimension of MUDs can be viewed as a multi-authored interactive text. However, despite this possibility, MUD sessions do

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[29] From: gerstnet@Informatik.TU-Muenchen.DE; Newsgroups: rec.games.mud.misc; Subject: Verbs and adverbs top list; Date: Sat, 6 Nov 1993 13:42:55 GMT. The full text of this article can be found in the Appendix 5.

not truly resemble scripts or books. The language is simply not the same. It is more dynamic and less carefully constructed. Interaction on a MUD is, after all, interactive, synchronous and ephemeral. Although sessions may be recorded using computer programs designed for the purpose, MUD interaction is not designed for an audience uninvolved in it. This interaction is not enacted to be read as an artefact, but to be experienced subjectively. It is not a text but a context. Virtual interaction loses emotional and social meaning when transposed to a computer file and re-read. The pauses, breaks, disjunctions, speed and timing of virtual conversations are lost in such transposition, and such factors are a crucial signifier of meaning and context on MUDs.

Language on MUDs is not merely a hybrid between written and spoken language, though it contains elements of both. The language used by MUD players contains of its own conventions and textual gestures. It rarely allows any tense but the present, with all actions and feelings crammed into that one highly charged tense. The present tense allows presence and dynamism. Each moment on a MUD is a matter of existent experience, not recollection. It is immediate, and in it have evolved grammatical forms that stress this immediacy. The most common of these forms is known as 'verbverbing'. This practice is widespread, and is used on all MUDs in which it is possible to do so.[30] It simply involves the double repetition of actions:

```
Fred hughugs Ginger.
Ginger nodnods to Laurence.
Laurence gringrins at Vivien.
```

In this instance, the linguistic practices found on MUD metaphorically mimic social practices. The tense repetitive action is analogous to the twitching of muscle tissue. In actuality, one does not merely grin or hug or nod in one single fluid motion. Each action is a compound of many contractions and relaxations of muscles, and movements of limbs. 'Nodnod' is a textual form that comes far closer to the actual act of nodding than does the simple word 'nod'. It is an immediate form of the

[30] That is, on social MUDs where the pose command is available, or in the 'emote rooms' on adventure MUDs.

participle 'nodding'. It is a continuing verb, a representation of an action which overlaps more than one point in time.

MUD language does not employ the same degrees of respect for textual conventions as do other forms of written language. MUD players have at their command a keyboard that allows them to employ a finite set of characters—the alphabet, numbers, punctuation signs, and symbols such as % and &. Written language ascribes various rules to the use of these characters, and assigns each character a certain place and meaning. Ampersands, percentage signs and exclamation marks all have their assigned tasks in written texts. Capitalised and lower case letters are called into action in various well-known circumstances. Few written texts break with these conventions. Most writers begin sentences with capital letters, end questions with question marks and use percentage and hash signs only when referring to numbers. MUD players, in common with users of other computer-mediated communication systems, do not hold with these conventions. For them, the standard symbols and signs available on a computer keyboard are tools to be called into uses far removed from those known to traditional grammarians. Commonly known as 'smileys' or 'emoticons', MUD players employ alphanumeric characters and punctuation symbols to create strings of highly emotively charged keyboard art:[31]

:-) or :)	a smiling face
;-) or ;)	a winking, smiling face
:-(or :(	unhappy face, or 'unsmiley'
:-(*)	someone about to throw up
8-)	someone wearing glasses
:-P	someone sticking out their tongue
>:-O	someone screaming in fright, their hair standing on end
:-&	someone whose lips are sealed
!#!^*&:-)	a schizophrenic!

'Smileys', or 'emoticons' are pictographs made up of keyboard symbols. They are at once extremely simple and highly complex. They provide a form of shorthand for

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[31] If the pictures these emoticons make are not immediately apparent, try tilting your head to the left. In the case of the first smiley, the colon represents eyes, the dash a nose and the bracket a smiling mouth. *Smileys*, compiled by David Sanderson (New York: O'Reilly and Associates, 1993) contains an extensive collection of emoticons.

the depiction of physical condition. In a few keystrokes, MUD players can provide their fellows with a far more graphic and dynamic—though perhaps not as finely shaded—depiction of their feelings and actions than a textual description could have furnished. Emoticons are legion on MUDs. Although the most commonly used is the plain smiling face—used to denote pleasure or amusement, or to soften a sarcastic comment—MUD players continually develop their own emoticons, adapting the symbols available on the standard keyboard to create minute and essentially ephemeral pieces of textual art to represent their own virtual actions and responses. This method of presenting textual characters as representations of physical action can be confusing to the uninitiated. Interpreting them demands not only familiarity but skill and imagination. Many emoticons are easy to interpret with a little practice. Others are more obscure, but at the same time all the more evocative and affective once their obscurity has been explained. The 'schizophrenic' smiley, while seeming a jumbled mess to the uninitiated, offers both humour and meaning to those in the know.

On MUDs non-verbal cues are not apparent. Words are all that are available to players, and they must compress the richness of meaning that we rely on to supplement and make a context for words into words themselves. Language on MUDs serves not only as a vehicle for communication but as the context for that communication. There are no external referents in the game world—nothing to be seen or heard or touched. All there is are words, which serve both to define and represent the simulated environment. Language use on MUDs is used and developed so that words can become their own referents and form their own context without immediate external support. MUD culture is one which relies on the languages used by the wider community, but is not restricted to those languages—players on MUD systems have developed their own ways of using words to express what we normally do not demand that language express.

"Culture," suggest Van Maanen and Barley, "can be understood as a set of solutions devised by a group of people to meet specific problems posed by situations they face in common."[32] In this sense culture consists of a set of behaviours and rules which give a shared significance to common experiences and problems. Players of MUD systems are commonly faced by the problems inherent in the medium's reduction to pure text, and its annihilation of conventional models of social interaction based on physical proximity. The measures which players of MUD systems have devised to meet their common problems are the markers of their common culture. They have devised systems of symbolism and textual significance which enable them to achieve understanding despite the absence of conventional social context cues. With these tools MUD players are able to read between the lines of text which make up their virtual world, a skill that is all the more challenging and all the more crucial in such an environment. This shared ability allows me to think of the players of a MUD as sharing a common culture, and this common culture allows MUD players to engage in activities that serve to bind them together as a community.

Just as building and describing commands allow players to create a physical context to act within, commands for communication allow players to create a social context. The pose and feeling commands in particular offer players a medium through which to substitute for the non-verbal cues that we take for granted in everyday life. By using them players may shrug, laugh, smile demonically, frown in anger, and offer hugs and kisses. By using each of these commands MUD players are able to string a web of communication which ties each player to a social and virtually physical context, a shared web of verbal and textual significances that are substitutes for, and yet distinct from, the shared networks of meaning of the wider community. This unique method of communicating is the set of solutions devised by MUD players to meet the specific problems that they face, and which bind them into a common culture.

Disinhibition and Social Experience

If all computer-mediated communication systems can be said to have one single unifying effect upon human behaviour it is that usage tends to cause the user to become less inhibited. Although they often disagree on the effects of such lack of

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[32] John Van Maanen, and Stephen Barley, "Cultural Organization: Fragments of a Theory." *Organizational Culture.* Eds. P.J. Frost et. al. (Beverly Hills: Sage, 1985) 33

inhibition, researchers of human behaviour on these systems have often noted that players tend to behave more freely than they would in face-to-face encounters. Sproull and Kiesler describe computer-mediated behaviour as "relatively uninhibited and nonconforming."[33] Kiesler, Siegel and McGuire have observed that "people in computer-mediated groups were more uninhibited than they were in face-to-face groups."[34] The forms that this disinhibition takes differ from one researcher's experience to that of the next. Some have seen an increase in examples of aggressive and disrespectful behaviour; others have noted increases in friendliness and intimacy. Behaviour on MUDs conforms to these observations. Players do seem to be less inhibited by conventions seen in everyday life. They can be seen to be both more intimate and more hostile with each other than would be socially acceptable in everyday life, particularly when considering that hostility or intimacy may be shown among players who are strangers to one another.

However, being disinhibited is not the same as being uninhibited. MUD players experience a lowering of social inhibitions; they do not experience the annihilation of them. The social environments found on MUDs are not chaotic, or even anarchic. There is indeed no moment on a MUD in which players are not enmeshed within a web of social rules and expectations. Descriptions, communicative commands and specialised language and textual forms enable the social understandings which link people together and allow the evolution and transmission of social norms. Such norms have arisen on MUDs, and as I will show in Chapter Two, so have social structures and methods of social control. However, these webs of meaning and control are not as immediately apparent on MUDs as they might be in actual life. Substitutes for the contexts and atmospheres that we rely on to regulate and define our behaviour may have been developed on MUDs, but it takes time for players to learn to recognise and to adopt these substitutes. Consequently, in the initial stages of play, the virtual environment may seem to be a place where etiquette has been replaced by chaos, and some players do seem to assume that within the confines of the MUD anything goes. This initial tendency toward uninhibited behaviour has

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33 Sara Kiesler and Lee Sproull, "Reducing Social Context Cues: Electronic Mail in Organizational Communication." *Management Science* Vol.32 No.11 (November 1986): 1498.
34 Kiesler et al, 1129.

influenced the conventions that have developed on MUDs. It has resulted in behaviours which although not chaotic, do differ from the conventions we live with in actual life, and they may be described as disinhibited. Out of this have arisen a set of social behaviours in which it may be acceptable to talk to strangers, but not one in which the patterns of that talk are not subject to linguistic and cultural influences.

The nature of the MUD program itself encourages disinhibition. The behavioural influence of the virtual environment is not simply permissive; it encourages. Crucial to the fostering of disinhibition is the fact that MUD players are essentially anonymous. They need not be known to others by their real, legal names. They may instead choose to be known by any variety of name or nickname. Many choose to use conventional first names; many others adopt far more evocative and inventive pseudonyms. Let's return to the description of the LambdaMOO living room which was quoted earlier. At the end of the description, a list of players situated in that room was given:

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  Guinevere, jane, MadHatter, Fred, Obvious, Alex, jean-
luc, tureshta, Bullet_the_Blue, Daneel, KingSolomon,
lena, Laurel, petrify, Ginger, and Groo are here.
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The information which one player can gain about others on a MUD consists of the names by which they choose to be known and the ways in which they choose to describe themselves. All that can be known about a player is what he or she chooses to disclose, and every item of information is subject to change.[35]

The immediate effect of this pseudonymity is to provide players with a feeling of safety. Protected by computer terminals and separated by distances of often thousands of kilometres, players are aware that the likelihood of any of their fellows being able to affect their 'real lives' is minimal. There is little chance of a virtual action being met with an actual response. No one can be embarrassed or exposed or laughed at or hurt in their day-to-day lives. There are no sticks or stones to contend

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[35] One of the most interesting facets of this is the impossibility of knowing another's true gender, and of a player being of a different gender to that of his or her character. This will be discussed in Chapter Three.

with, and although words may hurt, players can always resort to the off-switch on their computer. This feeling of safety holds true for players of many Internet services. The mere fact of distance offers protection; pseudonymity strengthens this to make MUDs seem one of the safest possible social environments. This sense of safety enables MUD players to express greater intimacy toward each other than might be acceptable in everyday life.

Curtis has described increased intimacy on MUDs as a variety of 'shipboard syndrome,' the result of apparent proximity and the feeling that interlocutors may never meet in everyday life.[36] Since they have little opportunity to interfere with each other's everyday lives the demands of social self-preservation need not inhibit them. MUDs are a world unto themselves, and virtual ships that pass in the virtual night feel little need to anchor themselves in emotional responsibility—at least initially. Moreover, the MUD community depends on a richness of communication and the creation of social context. The system itself encourages MUD players to become intimate—or at least to play at intimacy. MUD systems, like any other, abhor a vacuum, and a vacuum on a MUD is seen in a lack of textual exchanges. The MUD universe functions only while players are willing to elicit text from the program and from each other, and are willing to volunteer their own contributions. Communication is necessary to the existence of the MUD and successful MUDs are likely to see a great deal of communication between players, which can then form a basis for familiarity and intimacy. Players on MUDs are likely to be disposed to feel that intimacy with fellow players is a harmless activity, and so be willing to take advantage of those aspects of MUDs that encourage intimacy.

The tendency toward increased intimacy which can be seen on MUDs facilitates the formation of strong personal attachments. Hiltz and Turoff have noted that some participants in computer-mediated communication systems "come to feel that their very best and closest friends are members of their electronic group, whom they seldom or never see."[37] That this can become so depends on the degree to which

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[36] Curtis, 29.
[37] Starr Roxanne Hiltz and Murray Turoff, *The Network Nation: Human Communication via Computer* (Reading, Massachusetts: Addison-Wesley, 1978) 101.

players are willing to suspend the usual rules of social self-preservation, and open up to each other. By assuming that the dangers associated with intimacy—the possibility of hurt and embarrassment—can be avoided on MUDs, players can allow themselves to become very close to one another. The safety of MUD friendships increases their worth, and players can, ironically, become extremely dependant upon such relationships. The lack of factors inhibiting intimacy, and the presence of factors encouraging it, can induce deep feelings of attachment in players toward their virtual friends:

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I don't care how much people say they are, muds are not
just games, they are *real*!!!
My mud friends are my best friends, their the people who
like me most in the entire world. Maybe the only people
who do...
They are my family, they are not just some dumb
game.....
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[38]

Some of these virtual friendships go beyond the platonic. MUD romances are a well established institution, held together by a number of tools and rituals. MUD lovers use the commands with which the MUD system provides them to transform the virtual stage into a set designed to express and uphold their feelings for one another. On social MUDs, the most common action taken by such partners is to set up virtual house together. They quite literally create a home, using the MUD program to arrange textual information in a way that simulates a physical structure which they can then share and invite others to share. Tokens are often exchanged, virtual representations of flowers and rings being attached to a player's virtual manifestation through the manipulation of the textual description of the character. More technically gifted players may create objects, which other players can interact with, that textually mimic the behaviour of pets and children. These relationships may even be virtually consummated through 'tinysex', a form of co-written interactive erotica.[39]

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[38] From: anonymous; To: emr@ee.mu.oz.au; Subject: MUDs are NOT just games!; Date: 12 Apr 1992 11:16:32 EST

[39] MUD players often refer to social phenomena on MUDs in the form 'tiny(noun)'—examples include 'tinysex', 'tinywife' and 'tinymarriage.' This stems from the name of the first social-style MUD, TinyMUD, written by Jim Aspnes. This will be discussed further in Chapter Three.

Such relationships can be taken quite seriously by those who engage in them. The prevalence of the virtual wedding attests both to the extent to which players attempt to recreate the trappings of actual romances in their virtual interactions, and to the ways in which the entire community of players on a MUD serve to act as witness for such attachments. MUD weddings are simple in conception. The virtual bride and groom are usually married by another player who virtually reads, and actually types, the wedding ceremony. Textual descriptions of rings, or other tokens, are exchanged along with the vows. The wedding is usually attended by a number of fellow players, whose participation in the event strengthens its imaginative reality in the shared minds of the MUD community. The forthcoming nuptials are often publicised in the communications media, such as newspapers, which are internal to the MUD. Some MUD systems, such as the Revenge of the End of the Line, have added technical support for their players' emotional attachments:

> For those loving couples who wish to discover the joys of matrimony, the command to get married is "marry <person>". BOTH parties must do the command. We don't believe in shotgun weddings or polygamy here (tho same-gender marriages are fine with us).
> To get a list of all the lucky couples who got married on EotL, simply type "mlist"; or, if you prefer to view only a certain range within the
> list, type "mlist <number> <number>".
> If you wish to find out the marital status of a particular player, use "mquery <name>".
> For married persons who have lost their rings (in combat or any other way), they can get a new ring with the "replace" command.

These relationships should not be thought of as emotionally impoverished. It may be only virtual actions that are being played out, but real emotions can be involved. In some cases the MUD romance may develop into a real life relationship, and actual marriages have been formed out of those on MUDs:

> I met Mark, who I'm now married to, on a MUD. When I first met him I was living on the West coast [of the United States] and he was on the East Coast. I was really new to MUDs, really clueless, and he gave me a lot of help. He was teaching me how to build stuff, and he let me start building off of this castle he'd built. We spent a lot of time chatting and we got closer and closer. It was really good—I could tell him anything and he was really supportive. We ended up building this castle together and everyone on the MUD treated us like a couple. I

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could tell that he was interested in me, and at first I
was reluctant to get involved but he was so nice and he
said that he really loved me and in the end we had this
MUD marriage.  It was so beautiful—i burst into tears in
real life half way through it! After a few months I had
the chance to visit the East coast, and we met while I
was there.  He was different from what I'd expected,
mostly in the way he looked, but we really got along
well, and I decided that I really did love him.  He
ended up getting a transfer to near where I lived and we
got married last year.[40]
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Whether or not an individual romance is carried over into everyday life, it is important to appreciate that many MUD lovers do not feel that their relationships are shallow or inconsequential. They can be very important to those involved in them, and much effort can be expended in creating an environment that reflects the feelings of the players. The castle built by the two players described above acted as a virtually physical affirmation of their emotions. Far from being unsatisfactory for "'more interpersonally involving communication tasks, such as getting to know someone", as Hiemstra describes some researchers of computer-mediated communication as having characterised the medium, MUD systems are the stage for strong emotional bonds, both romantic and platonic.[41]

Romances and deep friendships display MUD relationships at their most idyllic, but the lowering of inhibition seen on MUDs has another side. The disinhibiting effects of relative anonymity and physical safety in the virtual environment can encourage the enactment of aggressive and abusive behaviours, and, as I will describe in the following chapter, it is at this point that overt forms of social control which have developed on MUDs come into play. The seeming safety of MUDs can lead some players to use them as a forum for the expression of hostility. MUD systems can "reduce self-consciousness and promote intimacy" but they can also lead players to feel free to express anger and hatred.[42] This can take the form of 'flaming', a phenomenon of computer-mediated communication which has been characterised as the gratuitous and uninhibited expression of "remarks containing swearing, insults,

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[40] From: anonymous; To: emr@ee.mu.oz.au; Subject: MUD romances?; Date: Sun, 2 May 1993 22:02:04 GMT

[41] Glen Hiemstra, "Teleconferencing, Concern for Face, and Organizational Culture," *Communication Yearbook 6*. Ed. M. Burgoon. (Beverly Hills: Sage, 1982) 880.

[42] Kiesler et al, 1127.

name calling, and hostile comments."[43] The anonymity of the player behind the pseudonymous character makes the possibility of everyday punishments appear to be limited. The safety of the medium causes the sanction of physical violence to appear irrelevant to virtual actions, although, as I shall discuss further on, social sanctions are present and often in a textual form that apes physical violence. Nevertheless, the safety of anonymous expression of hostilities and obscenities that would otherwise incur social sanctions encourages some people to use MUDs as a forum for airing their resentment of individuals or groups in a blatantly uninhibited manner.

In some cases harassment of individual players occurs. A harassed individual may face repeated messages from the harasser, and be the object of derogatory descriptions written into objects created purely for that purpose—the virtually physical context can be made to reflect an individual's feelings of hostility as easily as those of intimacy and affection. These electronic monuments to hate can be as upsetting and hurtful to players as the more positive relationships can be sources of support and happiness. Although insults relayed over MUDs may be brushed off just as they may be in actual life, MUDs also provide unique opportunities for personal attacks.

The most striking example of virtual violence that I have come across took place on JennyMUSH. JennyMUSH is a virtual help centre for people who have experienced sexual assault or abuse. Users of this MUSH share a strong bond in their common trauma, and for many of them the MUSH provides their only source of community support. At its happiest, JennyMUSH offers a tremendous example of how MUD programs can be used as valuable social tools. The system was designed with this aim in mind. The chief administrator, or God, of the MUSH is a psychology student whose field of interest is the treatment of survivors of assault and abuse, and the university that she attends fully supports the JennyMUSH project. This official support ensures some degree of security for users of the system, who can be sure that the MUSH will remain in stable existence.

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[43] Kiesler et al, 1129.

Nevertheless, official support cannot ensure safety from the less positive aspects of the virtual environment. A single user of JennyMUSH was able to subvert the delicate social balance of the system by using both technical and social means to enact anonymously what amounted to virtual rape. Two weeks after being assigned a character, a user of the system used the MUD's commands to transform him or herself into a virtual manifestation of every other user's fears. This user changed 'her' initial virtual gender to male, 'his' virtual name to 'Daddy', and then used the special 'shout' command to send messages to every other user connected to the MUD.[44] He described virtual assaults in graphic and violent terms. At the time at which this began, none of the MUD's administrators, or Wizards, were connected to the system, a fact that may well have been taken into account by the user. For almost half an hour, the user continued to send obscene messages to others. During that time, some of his victims logged out of the system, taking the simplest course to nullify the attack. Those who remained transported their virtual personas to the same locale as that of their attacker. Many pleaded with him to stop, many threatened him, but they were powerless to prevent his attacks.

At the end of that half hour, one of the Wizards connected to the system. He found twelve users connected to the system, all congregated in one place. On transporting himself to that place, he found eleven of those users being obscenely taunted by the twelfth. Quickly realising what was going on, the Wizard took a kind of vengeance upon the erring player that is only possible in virtual reality. He took control of the player's virtual manifestation, took away from him the ability to communicate, changed his name to 'Vermin' and changed his description to the following:

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This is the lowest scum, the most pathetic dismal object
which a human being can become.
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What had preceded had been painful and ugly—what ensued has been described to me as "virtual carnage". The eleven users who had been victimised by this now impotent one turned upon him and took dreadful virtual revenge. They described all the most

[44] The shout command, while not unique to JennyMUSH, is not available on all MUDs. On those which do offer it, usage is often restricted to privileged users such as Wizards and Gods.

violent punishments they would like to enact on this and all other attackers, emoting—in both senses of the word—all the hatred and rage which JennyMUSH had been established to help people deal with.

Since this incident, if such a mild word can be used to describe it, many things have changed on JennyMUSH. The system has become far more security conscious. The 'shout' command, which enabled 'Daddy' to send messages to all players connected to the system, is no longer available to users. The information displayed to all users on connecting to the system now includes directions on how to avoid unwanted messages by preventing the MUSH system from relaying messages from a particular user, a facility known as 'gagging'. New users must now be vouched for by at least two established users before they will be given a character, and all users must provide the administrator of the MUSH with a valid electronic mail address as well as their actual legal name.

What happened on JennyMUSH could happen on any MUD system, and probably has happened on many.[45] The particular purpose for which JennyMUSH was constructed may have meant that the incident was all the more traumatic for its users, but the same degree of hurt resulting from virtual actions could be brought about on any system. JennyMUSH's experience starkly demonstrates the degree to which users can feel as though they are free to act on feelings and to act in ways which mainstream society hopes to suppress. The cruelty and callousness shown by this abusive user were expressed in a unique form in this virtual environment—he was able to project onto both the virtual environment and the virtual manifestations of other players a kind of violence that may have been all the more distressing for its lack of physicality, and attendant impossibility of fighting back. He was able to shape reality into the forms he wished, and transform it into a reflection of his own cruel intentions.[46]

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[45] An account of a similar episode on LambdaMOO can be found in a fascinating article by Julian Dibbell, published in the December 21 1993 edition (Vol. 38 No. 51) of *Village Voice* and entitled "Rape in Cyberspace or How an Evil Clown, a Haitian Trickster Spirit, Two Wizards, and a Cast of Dozens Turned a Database Into a Society."

[46] Although I have referred to this player as 'he', that being the sex of the character 'Daddy', there is no technical reason why the person behind the character could not have been female.

The kinds of action taken by the other users, and by the Wizards and God of JennyMUSH, use this same ability to reshape reality, this time into forms that create and reinforce social rules and structures. The final lesson to be learnt from this episode, one which will be pursued in the next chapter, was described by JennyMUSH's administrator as this:

> We spent so much time trying to make JennyMUSH a place where people could feel free to speak out—we provided anonymity and very few restrictions. Sadly, we didn't foresee the negative aspects such encouragement could have. In the end we discovered that we could not base our little virtual society on "freedom to"—we had to balance it with "freedom from" and that meant the formation and enforcement of rules and a strict hierarchy of privileges.[47]

[47] From: anonymous; To: emr@ariel.ucs.unimelb.edu.au; Subject: The mudrape fiasco; Date: Wed, 9 Dec 92 10:45:23 EST.

Chapter Two:

Power, Social Structures and Social Cohesion

The failure of the ideal of complete freedom in cyberspace was an early phenomenon. The CommuniTree computerised bulletin board of the mid 1970s suffered just such a fate as JennyMUSH.[48] Initially a forum for intellectual and spiritual discussion amongst adults, in an environment where privacy was guaranteed and censorship censured, CommuniTree collapsed under the onslaught of messages, often obscene, posted by the first generation of adolescent school children with personal computers and modems. In the wake of what one participant called the "consequences of free expression" technical means were introduced to enable the system's administrators to monitor users' activities and censor 'inappropriate' messages.[49] It was here, in what had been a project as socially concerned and politically idealistic as JennyMUSH, that, as Stone puts it, "the age of surveillance and social control had arrived for the electronic virtual community."[50] In practice, as Stone further comments, such controls have proved to be necessary adjuncts to maintaining order in virtual communities.[51]

Players of MUD systems love and hate in their virtual environments as strongly as anyone does in actual life, and the manifestation of such emotions is made possible by tools that give virtual realism to the imaginings of players. The exercise of imagination is necessary for the creation of a social context within which to act. By utilising the dramaturgical tools provided by MUD programs, players create the basis for shared social understandings. Out of such usage have come linguistic forms which

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48 See Allucquere Rosanne Stone, "Will the Real Body Please Stand Up?: Boundary Stories about Virtual Cultures," *Cyberspace: First Steps*. Ed. Michael Benedikt. (Cambridge, Mass.: The MIT Press, 1991) 88-92 for a discussion of the CommuniTree project.
49 Stone, 91.
50 Stone, 91.
51 Stone, 91.

allow the expression of emotions and conditions usually beyond the scope of pure language. It is the actualisation of imagined reality that makes this possible—nevertheless, it is clear that players' imaginings cease to be acceptable when they threaten the integrity of these shared understandings. For imagination to be permitted actualisation by other players, it must allow others to maintain the integrity of their imaginings. Violation of that integrity is perhaps the greatest crime on a MUD. What happened on JennyMUSH offers a graphic example of how anonymity and disinhibition may allow players to crush that sense of integrity, and how much anger can be caused by such attempts. The measures taken by the users, Wizards and God of JennyMUSH, both immediately and in the long term, show how order is maintained on MUDs through social and technical conventions. Surrounding these measures have arisen social structures that rely both on such measures and on an encouragement of integrity and verisimilitude in players and administrators' creativity.

The socio-emotional plots played out on MUDs are only ad-libbed in the immediate instance. Players may play their cultural game according to personal whim, but they play it out on systems that are as subject to the enactment of power and privilege as are systems in the 'real world'. The "theory of technological politics," says Langdon Winner, "suggests that we pay attention to the characteristics of technical objects and the meaning of those characteristics."[52] MUDs may on the one hand be characterised by their encouragement of disinhibition; on the other they are characterised by a facility for allowing the creation and support of internal devices that uphold social structure as well as social activity. The technical nature of MUDs can be used to create the basis for a hierarchy amongst those who play them. The methods used to create social and physical contexts on MUD systems are also used to create political structures which form meta-contexts.

Hierarchies of Power on MUDs

Social structures on MUD systems rely on the control of players' abilities to manipulate the elements of the virtual environment. The haves are those who can

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[52] Langdon Winner, "Do Artifacts Have Politics?" *The Whale and the Reactor*, (Chicago: University of Chicago Press, 1986) 22.

control the form of the virtual world depicted by the system; the have-nots are those who can't. Power on a MUD is quite literally the power to change the world. Although all players on the MUDs I have examined have access to tools that allow them to shape the MUD world to some extent, if only by the use of personal descriptions and the taking of virtual actions, no system allows all players access to all commands. Player privileges vary between the absolute and the minimal. The persons running the actual MUD program, commonly referred to as Gods, have total control. They have direct access to the computer files which comprise the system, enabling them to modify the MUD database in any way they please. They can design any virtual setting into the system, and so create a MUD universe of any flavour they wish. Within the game world, they have access to a range of commands which allow them to edit the world while interacting with it. They can edit and destroy any object on the MUD system—including the objects that represent players' characters.

The average player does not have such powers. On adventure-style MUDs players may only alter the game universe by interacting with it. Such players have no direct control over the game elements, and may not create new elements. By contrast, players of social-style MUDs are able to extend the virtual universe to some extent. They have access to a small library of commands that allow them to create and describe objects and areas, and make them behave in certain ways in response to input from other players. They may only change or destroy objects that they have created themselves, and are not able to tinker with objects created by other players. On some systems players may be subject to a quota limiting the number of objects they may build. Players on both social and adventure MUDs interact with the MUD database purely through the virtual world itself, and are not able to step outside that world and view and alter it in the form of raw data. There are many good reasons for these limitations. On a large international computer network it would be a security risk to allow any person access to the raw files stored on a computer. A limited amount of hard disk space may make it foolish to allow players to enlarge the MUD database to an unlimited extent. Pragmatic though these reasons may be, they are the basis for a social hierarchy in which greater status corresponds to greater control over the virtual world of the MUD system and greater ability to enrich that system.

Most MUD systems offer, as JennyMUSH began to in the wake of the ‘Daddy’ incident, facilities that can be used to silence or banish disruptive players. Some of these facilities are available to all players. They have the option of ignoring, or ‘gagging,’ another player. Such a measure does not actually affect the offending player, but prevents the offended one from receiving any messages from that player. By editing his or her personal virtual reality a MUD player can attempt to prevent harassment by severing the links of communication between him or herself and the harasser. Such attempts are not, however, always successful or satisfactory. A determined harasser, realising that a victim is employing these commands, may simply resume harassment through a new MUD character. Even when nominally successful, these measures are not always felt to be sufficient by victims of harassment. After all, ‘gagging’ does not prevent the harasser from speaking or being heard by others. The effects of this command are more akin to ‘ear-plugging’ and do not negate the adverse social effects of another’s hate-speech. Moreover, as Dibbell comments, the “gag-and-get-over-it school of virtual-rape counselling, with its fine line between empowering victims and holding them responsible for their own suffering” does not satisfy the needs of all who are advised to employ such measures.[53]

Such measures are, however, the least of those which can be employed against an erring player. Those who persist with unwelcome behaviour may be dealt with by the God of the MUD, who has at his or her disposal powers which act to exclude and shame their object. Offenders may be safe from actual physical violence at the hands of those they have victimised, but ostracism is common and social admonition has taken the form of ridiculing and subverting the efforts of disruptive players to actualise their imagined selves in the virtual world. Players who are a continual problem can be not only ignored by their victims, but punished and even banished by the God of the MUD. If called upon to do so a God can call down virtual fire from heaven—destroying the offending player’s character, and disallowing future connections from the particular computer that the offender had been connecting from.

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53 Dibbell, electronic manuscript.

In most cases these technical measures are sufficient to discourage offenders. Those who persist in their disruptive behaviour, or who counter it by other technical means, can be subjected to public rituals intended to humiliate and punish them, often in the form of a public shaming that utilises the God's special ability to redesign any aspect of the virtual reality of the MUD. An offending player can be 'toaded', a practice that traditionally involves the MUD's Gods or Wizards using their special powers to change the name and description of the player to present an unpleasant appearance (traditionally that of a warty toad) and moving the player to some very public area of the MUD where other players can taunt and chastise him or her. JennyMUSH's treatment of 'Daddy' was a classic example of this form of social punishment. This public humiliation is usually sufficient to discourage the player from visiting that particular MUD world again, even if earlier attempts at ostracism had been unsuccessful. In these kinds of punishments, power is at its most absolute. Foucault has described an effective form of power as one that enables the powerful to "gain access to the bodies of individuals, to their acts, attitudes and modes of everyday behaviour."[54] On a MUD, where the physical body is not present, but the virtual body is at the absolute mercy of the Gods, such power exists quite literally. The Gods of a MUD can manipulate a player's virtual manifestation in any way they please. They can reshape it, remake it, remould it, destroy it. From the perspective of the game universe, such acts of power are absolute.

Punishment on MUDs shows a return to the medieval. While penal systems in the Western nations that form the backbone of the Internet—the United States, Europe, the United Kingdom and Australia—have ceased to concentrate upon the body of the condemned as the site for punishment, and have instead turned to 'humane' incarceration and social rehabilitation, the exercise of authority on MUDs has revived the old practices of public shaming and torture. The theatre of authority in virtual reality is one which demands and facilitates a strongly dramaturgical element. All actions on MUDs must be overt, every nuance of experience must be manifestly represented for it to become part of the play, and so punishment must be flamboyant.

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[54] Michel Foucault, *Power/Knowledge: Selected Interviews and Other Writing 1972-1977*, Ed. Colin Gordon, Trans. Colin Gordon, Leo Marshall, John Mepham, Kate Soper, (Brighton, Sussex: Harvester, 1980) 125.

The virtual world of a MUD exists in its dramatic strength only in the minds of its players, but the play enacted in the virtual world emulates the physical rather than the mental. The public spectacle of punishment, which Foucault describes as disappearing from the Western political scene between the eighteenth and nineteenth centuries, is alive and well on MUDs.[55]

Because of their special powers and their special role within a MUD community, Gods and Wizards are frequently the object of special treatment. Many players approach them with, as Curtis puts it, "exaggerated deference and respect."[56] An example of such treatment was forwarded to me by a Wizard on FurryMUCK:

```
Fred pages you with, "Excuse me sir, I hope I'm not
bothering you, but could you possibly help me? I'm
really new to MUDS, and I've got some pretty dumb
questions.  If you haven't got time to answer them
please don't worry about it, but if you do I would
really appreciate it."
```

Many Wizards and Gods do not spend much time travelling through their virtual domain. Instead, they often retreat to the sanctity of one virtual room. It is to this space—this virtual throne room—that mortal players are called when they wish to speak with the God or Wizard. The protocol for gaining admission to such rooms varies from system to system, but is never non-existent. Most of these rooms cannot be entered without the permission of their owner; entry to some requires the direct intervention of the deity to 'teleport' the supplicant to the holy presence. The sign on the door of a Wizard on EOTL reads as follows:

```
  That door leads to Moe's Sanctum Sanctorum.  If you
knock on it, and he's around, he might invite you in or
come talk to you.  Lately, though he's been pretty busy,
so don't bug him unless you need something.  THINK VERY
HARD BEFORE KNOCKING.  Moe has been known to turn people
into barnyard animals if they pester him frivolously.
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In some cases the motivation for the creation of such social barriers may simply be to screen out trivial requests from players. Nevertheless, whatever the intention, the

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55 Michel Foucault, *Discipline and Punish: The Birth of the Prison*, Trans. Alan Sheridan, (Harmondsworth, Middlesex: Penguin, 1986) 8.
56 Curtis, 30.

power to define what is trivial and to impose punishment for transgressions of that definition lie with the Wizards and Gods. Many preserve a kind of magical or divine distance between themselves and the mortal players of their world. Curtis may be bemused by the deference paid him as the God of LambdaMOO, but such deference is paid and is motivated by the technical and social symbols of power by which Gods and Wizards are surrounded. The basis of authority on MUDs is as medieval as its theatre. Hierarchies are maintained through careful attention to the trappings of power, power which, as did medieval kingship, owes its legitimacy to the favour of the Gods. Distance between the rulers and the ruled is carefully maintained. Special spaces are created by virtual rulers to cater for and augment the signs of their power. Virtual analogues of sceptres and crowns abound—most Gods and Wizards carry signs of their rank upon them. Divine authority on MUDs is made manifest in technical miracles and virtual symbols of power.

Nevertheless, such power does not always go unquestioned. The legitimacy of power and the enaction of it can be questioned by players, especially when notions of favouritism are introduced. Wizards are created by Gods, and in theory promotion to such a privileged rank is linked to talent. The more a player is able to translate their imagination into the MUD database—the more ingenuity they show in their manipulation of the MUD program—the more likely they are to be promoted to the level of Wizard. A talent for making the MUD more virtually real should be rewarded by being granted greater powers to do so. In practice, however, this may not always be the case. Accusations of Godly and Wizardly prejudice and injustice regularly surface on the USENET newsgroups devoted to the discussion of MUD playing:

```
This mud is TOTALLY LAME! One of the wizzes can't
program for shit and only got to wiz coz he rooms with
the chief wiz, and another wiz just got the job by
having tinysex with the chief wiz.  I spent DAYS
building lots of really cool stuff, really cool descs
and everything, and when I showed it to the cheif wiz
and asked to get a higher quota he just said "I don't
even know you" and refused!!! ARGH!! So I complained and
told everbody on the mud what happened and he dests my
character and deletes everything I built.  I am so sick
of wizzes who expect you to brown-nose to get anything.[57]
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[57] From: anonymous: Newsgroups: rec.games.mud.diku; Subject: Complaint about [name of MUD deleted]; Date: Date: Thu, 13 May 1993 19:54:29 -0500

Gods and Wizards may be the ultimate power within each MUD universe, and may often be the subject of respect and even fawning as players attempt to curry favour and gain privileges, but the atmosphere of respect which often surrounds them can lead to the favouring of players who are prepared to offer adulation, and passing over those who are not. The canny wielding of power often means that privileges are bestowed upon those who will uphold the Gods' hegemony; the clumsy handling of this process can threaten that hegemony. The potential for the abuse of power and for unfair treatment of players can create resentment, particularly when there is a conflict between individuals who feel that Gods and Wizards have a duty to behave fairly and those who feel that the administrator of a MUD system has the right to do with it as he or she likes. The number of MUD systems in existence to some extent mitigates the potential for problems, since, as one player replied to the complainant above:

> Look, it's his MUD, he can do what he wants. But if you don't like the MUD, don't play it! If the wiz is an asshole... no one will play and the MUD will close. Simple! Sheesh...[58]

The common wisdom is that simple economics will make it unrewarding for a Wizard or God to treat players badly, and so most successful holders of those positions will by necessity treat their players reasonably well.

Power on MUD systems depends on the individual's ability to manipulate the components of the system; privileges consist of increased access to such world-manipulating tools. The degree to which this power is successful is dependant upon players' belief in the value of the MUD world, and the degree to which they have invested meaning and emotion in the objects within it. That the objects and characters stored in the computer files are ascribed value leads to the special treatment of those who can alter those files. Gods' and Wizards' powers depend upon their success in building a system which players view as a virtual world, a system to be interacted with in such a way as to invest emotion in the continued existence of the world and its

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[58] From: ksomme@cmcvx1.claremont.edu; Newsgroups: rec.games.mud.diku; Subject: Complaint about [name of MUD deleted]; Date: Date: Sun, 16 May 1993 21:03:42 GMT

components. Systems which are so viewed will be more likely to attract players willing to apply their talents and invest their effort in building new areas and objects. The richness of each virtual world leads to its being further enriched.

Adventure MUDs: Survival of the Fittest

Players of adventure-style MUDs must contend with the internal reality of the game world. The characters played are subject to ‘realistic’ forces. On some systems, they grow hungry, thirsty and sleepy, and must find safe places to sleep and rest. They must protect themselves from the ravages of an often hostile climate. They must establish, and often pay for, a safe place to continue their existence while their controlling player is unable to attend to them. Such MUD players are driven by the ‘biological’ needs of their characters and by the social and climatic circumstances of the game world. On some systems, players are often confronted with messages from the game program, letting them know that ‘they’—or rather, their characters—are hungry, thirsty or tired. If players do not act quickly to satisfy their characters’ hunger or thirst, those characters will die. If players do not find a safe place for their characters to sleep in, those characters will likely be murdered in their sleep by the mythical monsters that commonly inhabit these MUD worlds—or by another character, provided that the particular game world is one that allows direct combat between players. Before logging out of the game, players must first rent their characters a room in one of the hotels that form a central and basic part of the game world. Renting a room ensures that the character and his or her possessions are kept safe until the player returns to the game. A character left without a rented room may forfeit his or her possessions to unnamed thieves generated by the MUD program, and is vulnerable to the attacks of monsters and other players.

As a consequence of all this, players spend a large amount of time merely making sure that their characters survive. They must continually load themselves with supplies of food and drink before venturing on quests. They must make periodic trips back to the central town of the MUD world to replenish these supplies. They must continually amass treasure—by killing monsters—with which to buy supplies and pay the rent on hotel rooms. It is impossible to play an adventure-style MUD casually. Players who log into the game once a week, and play for only an hour or so at a time, will be continually forced to restart the game. They will never be able to find enough treasure to enable them to pay for the safety of the belongings they buy or win, and so will always lose them to the relentless economics of the game. The least devoted players must, therefore, play often enough and for long enough to maintain their characters' existence. They must, as Alice found in *Through the Looking Glass*, keep running just in order to remain in the same place. Adventure-oriented MUDs, such as LPMUDs and DikuMUDs, demand a basic level of dedication from players. Unlike social style MUDs, such as MUCKs and MOOs, the game itself demands attention. It seems to have a life of its own. A MUCK character remains in stasis when not being controlled by a player, whereas a DikuMUD character can die of starvation, be the victim of robbery or murder, or become part of a marauding Giant Bear's dinner, should the player relax his or her vigilance or fail to log into the game before the character's money, and therefore rented safety, runs out.

At the heart of all social structures amongst players of adventure MUDs lies the hard fact that adventure MUD universes are dangerous. Foucault has said that "the phenomenon of the social body is the effect not of a consensus but of the materiality of power operating on the very bodies of individuals."[59] Translated into the particular terms of the imagined worlds of adventure-style MUDs this insight has special meaning. There, it is the virtuality of the power of the virtual world operating upon the imagined bodies of individual players that creates the social body of which they are a part. Cooperation is an important element of survival on adventure MUDs. In many cases, players need each other to survive. Particularly strong monsters are more easily defeated by the concerted efforts of a group of players than by one alone. The necessity for cooperative effort has been built into the fabric of the game on many systems. Quests, specific tasks formulated by the Gods and Wizards to test the strength of their players, often demand the application of more skills than one character can have, and so must be undertaken by a group. The economics of the game support group effort. Special commands enable players to form groups, make concerted attacks on monsters and share the experience points gained in shared

[59] Foucault, *Power/Knowledge*, 55.

victories. This technical support and dramatic demand for cooperation between players translates into a social system in which players are expected to aid each other. Many players will guard the possessions which had belonged to a fallen character, and will wait for them to return from the church to which their spirit has gone to pray for reincarnation so that on return they may regain their possessions. This kind of honour system based on favours and debts of gratitude can be especially kind to novice players. The help files on EOTL explicitly encourage players to help the less experienced among them:

> When a newbie begs for some money or help, it is usually expected that you will give what you can. Everyone was a newbie once, and probably got their start through the generosity of other more established players. The least you can do is show the same consideration to future newbies (known as the golden rule). And above all, remember it's just a game...but with real people on the other end side...

Such cooperation is not, however, based purely on comradeship. The fact is that players can, if they so choose, cause each other considerable hardship. It is not altruism that causes players to aid each other, but the idea of investing in other players' goodwill. Do unto others as you would have them do unto you—that is the rule that prevents many players from taking advantage of the misfortunes of others.

Players are at their most vulnerable when in combat. When fighting a system generated opponent—a monster or 'mobile'—many players will be forced to retreat and use healing potions and spells, or simply rest, before being able to rejoin the fight and eventually kill the monster. It can take several bouts of fighting and healing before the monster can be killed. In the times when a player has retreated, it is possible for another player to come along and kill the now weakened monster while its original opponent is resting. The information on etiquette available on EOTL has this to say about the practice of 'kill-stealing':

> Believe it or not, there are certain unspoken rules of behavior on MUDs. [...] It's really bad form to steal someone else's kill. Someone has been working on the Cosmicly Invulnerable Utterly Unstoppable Massively Powerful Space Demon for ages, leaves to get healed, and in the interim, some dweeb comes along and whacks the Demon and gets all it's stuff and tons of xps. This

```
really sucks as the other person has spent lots of time
and money in expectations of the benefits from killing
the monster.  The graceful thing to do is to give em all
the stuff from the corpse and compensation for the money
spent on healing.  This is still a profit to you as you
got all the xps and spent practically no time killing
it.
```

Players who break this rule are not popular. Some may be subject to the kinds of punishment and displays of power that Gods and Wizards may call up. Others may be subject to the vengeful attacks of their victims and fellow players.

On some adventure MUDs players' characters are able to kill one another. As far as a character is concerned, another character is as easily a target of the 'kill' command as is an orc or dragon. For some players, the possibility of 'playerkilling' adds depth and spice to the virtual world. The addition of greater threat and greater danger to the virtual universe enables players to identify more strongly with their virtual persona. The thrill which players describe as a part of such battles, the sheer excitement of adding an uncontrolled element to the game universe, makes that universe all the more real. Death and danger make the imagined life all the more worth living, and lift the game beyond the confines of the predictable. It is the loss of control inherent in a game style that overtly relies on a fight for greater control that adds meaning to the game. Victory in such battles is all the more sweet for the test of a player's skill which it entails.

Nevertheless, not all players need to have the fruits of their imagination challenged to feel that their animation is valid. On the contrary, the intrusion of others' conflicting versions of the world can disturb the imaginative balance of the player. Such conflicting world views are the basis of many power struggles between players. For some playerkilling destroys the mental illusion in which they wish to immerse themselves by connecting to a MUD system. The forceful intrusion of another's imagined reality, an intrusion that can shatter the carefully constructed projections of the victim, inspires great resentment and anger. The practice of playerkilling is looked upon by some players with anger and contempt:

```
Playerkilling is a pointless exercise allowed by some
muds, whereby lab geeks with testosterone poisoning kill
each other instead of mobs and pretend that they are
better mudders as a result.  This collective delusion
makes pkers overbearing, obnoxious, and generally no fun
at cocktail hour.[60]
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In response to this article, another player replied that:

```
Playerkilling is the ultimate chessmatch, where you are
depending on your knowledge of your capabilities and
your mud to match those others who might play.  While it
is sometimes abused by losers who feel manly by killing
newbies, it also seperates the real mudders from the
yellow-striped regen waiters who would just as soon wait
around to kill a monster that just stands there waiting
to die.  PKers are neither overbearing nor obnoxious,
but they are occasionally arrogant, but then again,
being better players, they have a right to be.  They
never attend cocktail parties because they think those
little sandwiches are for wusses.[61]
```

Playerkilling, then, is an issue surrounded by controversy. On many MUDs, playerkilling is heavily controlled, either by technical or social measures. Some adventure style MUDs prevent player killing by removing the possibility of it from the MUD computer program. Others simply regulate it. There are two main ways of technically controlling the circumstances under which players may attack each other. The first is to require that players set a ‘player killer flag’ on their character. Only those with such a flag set may be attacked—the program will simply not allow a player to attack another whose killer flag is unset. The second measure is to allow players to attack only those who are close to their own level of competence. On MUDs where a level system is in place, this is commonly implemented. Players who have attained Level 5, for instance, may be able to attack players on Levels 5 and above, but not those on lower levels. At the same time, they cannot be attacked by players on a higher level, unless they initiate the combat—only characters at an equal or lower level may choose to attack them. This prevents victimisation, though not foolhardiness. Some systems, however, do not put any technical controls on player

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[60] From: doc@marble.bu.edu (Doc); Newsgroups: rec.games.mud.diku; Subject: Re: what is??; Date: 9 Dec 1993 18:03:33 GMT. ‘Mobs’ is a contraction of the term ‘mobile monsters’.

[61] From: heretic@huey.cc.utexas.edu (Fulk Nerra); Newsgroups: rec.games.mud.diku; Subject: Re: what is??; Date: 9 Dec 1993 14:26:21 -0600. The phrase ‘regen waiters’ refers to the time which many players must spend healing (regenerating) before heading back for another bout with a computer-generated monster.

killing. The Revenge of the End of the Line is one such system. The help files on EOTL say, with regard to playerkillers, that:

```
This is a label given to those players who hunt down and
kill other players.  These notorious psychopaths usually
go on killing sprees, killing lots of players in a short
amount of time.  Player killers have no qualms and no
remorse.  EOTL's official policy toward player killing
is one of tolerance.  Wizards can't help you if someone
kills you.  The best thing to do is to form a lynch mob
and massacre the killer to itty bitty bits....  Player
killers usually know Muds like the back of their hands
and are extremely dangerous.
```

Despite this laissez-faire ruling on the part of the Wizards and Gods of EOTL, playerkilling is remarkably rare, and the reasons for this lie in the social structure developed amongst players. Most EOTL players live by an unstated agreement that they should live and let live. Most players are not ‘psychopathic’ playerkillers, and will not initiate battles with those who are not known to enjoy this style of play. Those who do not choose to play this way, however, are often hunted down by those who wish to preserve this unspoken rule. The ethics of this kind of justice are incorporated into the game elements. Wanted posters are common in the towns and cities which form the core of EOTL:

```
      MoeTown's Most Wanted
      Neighborhood Watch Bulletin
The following people are wanted for malicious mayhem.
To collect the reward on one of these people, simply
blow a police whistle while in the room with the person.
If your call results in the death or capture of the
criminal, a representative will pay you at the police
station.  Police whistles may be bought for 10 coins
from the police chief:

Perpetrator's name:           Current reward:
1  : Voltron (player killer)    39850  coins
2  : Assasin (player killer)    35870  coins
3  : Shadowstrike               25730  coins
4  : Hermes                     25090  coins
5  : Shapeless (player killer)  24210  coins
6  : Whittle (player killer)    18690  coins
7  : Bowman (player killer)     14430  coins
8  : Rizzen (player killer)     13420  coins
9  : Time                       12640  coins
10 : Bluey (player killer)       5820  coins
```

As this poster implies, technical measures have been introduced to enable justice to be meted out to player killers. Policemen's whistles are an element of the game which has been hard-coded into its fabric. The social contract that encourages and allows the invention and use of such whistles, is, however, not a technical measure.

Playerkillers are often summarily dealt with by their victims. Adopting the techniques of the enemy's play, irate players can form bands dedicated to hunting down and killing playerkillers. Such a solution seems to be satisfactory to all parties in such conflicts. The appropriation of the playerkiller's style of play by his or her opponents allows all concerned to feel their style of play validated. Dedicated playerkillers do not appear to resent being the victim of playerkilling—in two years of MUDding and monitoring the rec.games.mud newsgroups, I have found only a few cases of a playerkiller complaining of injustice at the hands of a virtual lynch-mob, though I have found many instances of playerkillers describing with zest the chase they led their pursuers and the enjoyment they experienced in making their quest as difficult as possible.[62] Some have commented on the pleasure they feel at having caused the opponents of playerkilling to join their ranks. The playerkiller's pursuers feel similarly fulfilled. In their eyes, they have not adopted playerkilling as a form of play, but have appropriated such play to serve their own preferred style. Such conflicts have a happy ending—each party feeling their imagined virtual world validated by the outcome.

Social cohesion on adventure MUDs is the result of the Darwinian rule of the survival of the fittest. On the most superficial level, only the strongest and most talented players will survive and flourish on adventure MUDs. It takes time, effort and skill not only to become powerful on such MUDs, but simply to survive on them. At a deeper level, however, it is the most socially fit—the most willing to cooperate—who survive. The social body formed on adventure MUDs is the result of a common consensus to cooperate in fighting against the (im)materiality of the power of the virtual universe operating on the virtual bodies of each individual player.

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[62] Most complaints from playerkillers concern accusations of unfair behaviour on the part of Gods or Wizards—that, for instance, they have been unjustly punished for breaking the rules relating to playerkilling.

Social MUDs: Cooperative Appreciation

On social MUDs, players are not faced with the threats that players of adventure MUDs must contend with. Characters on MUCKs and TinyMUDs are never hungry or thirsty or tired. Instead they provide a tireless mechanism for the exercise of the players' creativity, and for interaction between players. It is this ease of use, rather than the need to protect and maintain their characters, which is the basis of social MUD players' cohesion. On adventure MUDs, social interaction often comes about through expediency, as when characters form gangs the better to slaughter some hapless dragon or infamous playerkiller. By contrast, social interaction on MUCKs and MUSHes is one of the three activities central to the game.[63] The others are creating, or building, and exploring the creations of others. These three activities complement and reinforce each other. Social interaction serves to create a network of players who constitute an audience for each other's creativity; acts of creation provide the stage for interaction.

In designing TinyMUD, the original social MUD, Jim Aspnes deliberately sought to escape from the competitive confines of adventure-style play. He explains that:

> Most adventure-style games and earlier MUDs had some sort of scoring system which translated into rank and special privileges; I didn't want such a system not because of any strong egalitarian ideals... but because I wanted the game to be open-ended, and any scoring system would have the problem that eventually each player would hit the maximum rank or level of advancement and have to either abandon the game as finished or come up with new reasons to play it. This approach attracted people who liked everybody equal and drove away people who didn't like a game where you didn't score points and beat out other players. I think that this effect created a kind of natural selection which eventually led to the current egalitarian ideals.[64]

The 'egalitarianism' that Aspnes claims as the basic ideal of social MUDs is often just that—an ideal. In practice, most social MUDs have a hierarchy of players as well

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[63] In a survey of 583 players on LambdaMOO, players were asked to nominate the activity that took up most of their time on the MUD. The results showed that socialising took up 57.26% of players' time, exploring took up 14.63%, building 14.14%, competitive gaming and puzzle solving 6.99%, and other activities 6.98%. See Appendix 6 for some preliminary results from this survey.

[64] Quoted by Howard Rheingold in *The Virtual Community: Homesteading on the Electronic Frontier*, (Reading, Mass.: Addison-Wesley, 1993) 162-163.

developed as those seen on adventure MUDs, complete with Gods, Wizards and variously privileged levels of players. However, these hierarchies are not based on competition and strength, but on interaction and contribution. Players do not rise to greater degrees of privilege by killing monsters, amassing points and gaining skills, but by inserting themselves into the social and imaginative matrix and becoming indispensable.

If players of adventure MUDs must be in regular attendance on their characters in order for those characters to survive and gain greater powers, players of social MUDs are free to enjoy unlimited access to their characters precisely because of those characters' independence of their players. Almost without exception, players of social MUDs exercise their ability to create new aspects of the game world. Each MUD encourages players to create their own 'home', a small section of the game universe with which the player's character is associated, and which is the portion of the game world in which the character appears to be when the player connects to the system. Most players make at least some token attempt to decorate their home with descriptions and objects. Many players extend their home beyond the confines of one virtual building, and go on to create intricate mini-worlds within the greater MUD world. In consequence of this encouragement to build, most social MUDs consist of a hodge-podge of differing environments. Some MUDs have come to insist upon adherence to a particular theme as a prerequisite of a player's promotion to one of the higher levels of game power. Before being allowed to build a greater number of objects, and before being given access to more complex commands and tools with which to build, players must demonstrate an ability to create environments that mesh with the existing game universe. In essence this system of meritocracy involves the relinquishment of one sort of power—the power to do whatever you like—in order to gain different and more extensive powers.

Many MUDs allow a number of intermediate levels between player and God. The God is able, at his or her own discretion, to increase a player's building quota, or even confer Wizard status upon a player. Some systems allow different levels of building tools to be available to different players, with more complex and powerful commands being available to those the Gods choose to give them to. That privileges are bestowed by the Gods of the system is a vital part of the hierarchy, and the means of its control. Only those who are approved of by the Gods and Wizards can gain greater power within the MUD system—being out of favour means being out of power. Most MUD systems indicate that gaining privileges is a matter of proving that you are worthy of them. The rule on the MUD 'MicroMUSE', for instance, is that:

> The quota system for keeping the database at a reasonable size is intended to promote constructive building and efficient use of available resources. Builders engaging on large-scale projects should ask a [Wizard] to inspect their work-to-date,and can then ask for quota increases as needed.

A similar policy exists on LambdaMOO, where the 'Architecture Review Board', an association of players originally appointed by the Wizards and now elected by the LambdaMOO community, is empowered to decide whom the Wizards shall bestow greater building privileges upon:

> To get a larger quota, you need to talk to some member of the Architecture Review Board. They will take a look at what you've done with the objects you've built so far and decide whether or not they think it would be a net gain for the LambdaMOO community if you were to build some more things.

All players on social-style MUDs have a rudimentary ability to add items to the game universe. All players can create, though the hierarchical system in force on some social MUDs might limit the number of items that novice players can create. But limited powers are powers nonetheless, and this relative egalitarianism is the reason which many players give for their preference for social MUDs. This attitude differs from that taken by many players of adventure MUDs, for whom the elitism of the upper echelons is the source of the desirability of entering those ranks. Compare these two articles from players of the two MUD genres:

> What I like about MUCKs is that I can just go off and build what I like. I can exercise my imagination

> without sucking up to any Gods or bashing any orcs. I can just do whatever I like straight away.[65]

and:

> The whole point of LPMUds is that once you've made Wizard you know you've earned it. Your privileges are earned, every bit of them. Not like on tinymuds, where ever luser can build his little home and create his little toys. When I meet someone who has made Wiz on an LP... I *know* they've done something to earn it, and if I [make Wizard] other people *know* I've earned it.[66]

In each case, it is access to and legitimacy of power that is the concern of the player. What differs is the perspective taken. In the one case it is the free availability of game powers, irrespective of the player's social position or level of external influence, which is attractive. In the other case it is the difficultly of gaining power, and the respect due to those who have persevered, which makes it so desirable. Each system serves to attract and form different types of players, yet each system is based on the exploitation of a common wish for power and influence.

However, many players on social MUDs do not make any attempt to win higher building privileges for themselves. On adventure MUDs, each player is by definition part of a system in which their efforts are geared toward the acquisition of greater wealth and power. On social MUDs the mechanics of the game do not demand that players spend time chasing after material—or virtual—gains. The pressure to be upwardly mobile is far less intense on social MUDs, and so fewer social than adventure MUD players make deliberate efforts of gain entry to the privileged higher echelons. Instead, players on social MUDs tend to form alternate hierarchies, functionally independent of the Wizards and Gods of the world. These hierarchies are social rather than economic in base—they depend on interaction rather than on the scarcity of the power commodity.

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[65] From: anonymous, Date: Wed, 14 Oct 1992 19:17:47 GMT, Newsgroups: rec.games.mud, Subject: To build or not to build?

[66] From: anonymous, Date: Fri, 16 Oct 1992 08:16:06 GMT, Newsgroups: rec.games.mud, Subject: To build or not to build?

These alternate hierarchies depend on an audience of appreciative and creative fellow-players rather than on competition with other players. Indeed the expressions ‘fellow player’ and ‘other player’ neatly describe the difference between the player hierarchies most common on the two genres of MUD. Social MUD players often seem to see each other as mirrors of themselves who will reflect the pride and achievement felt by each player toward what he or she has created. Adventure players seem more likely to view each other as inimical, as having the potential to shatter that mirror. Alliances between adventurous players are carefully negotiated. Allied players will often devise methods of ensuring each other’s loyalty by using spells or holding hostage valued items of treasure or equipment. Betrayal is not unheard of. A player’s ally may turn on him or her after the dragon has been killed, and may make off with the dragon’s hoard before the victim has time to react. Adventure MUD players tend to view each other with some suspicion. Each player is that mythical anthropological monster—the Other, who may expose and exploit the player, and shatter that player’s dreams of power and safety.

Social MUD players are not pressed into these oppositions. They cannot harm each other within the game world. Ordinary personal conflicts may of course arise—just as ordinary personal amity may arise on adventure MUDs—but these conflicts are not made more likely by the special properties of the virtual environment that the individuals interact within. Rather, players are encouraged by the nature of social MUDs to interact positively with each other. Hierarchies on social MUDs tend to be socially rather than technically enforced. Cooperation is inspired by a wish to extend the virtual world, not by the necessities of survival in it. Players become well-known through socialising, and through displaying the fruits of their imagination. Well-known adventure MUD players become so by virtue of attaining high levels of proficiency in the game universe. Well-known social MUD players become so by engaging in social activities on the MUD. Popular players commonly create interesting environments which many players visit and recommend that others visit. They spend a lot of time chatting with others, and many offer advice and aid to new players. These people form the backbone of social MUDs, and may indeed be better known to the majority of players than are the Wizards and Gods who spend most of their time engaged in the more complex work of administering the MUD program.

On some MUDs, this social hierarchy has been written into the game as an alternative track toward officially recognised status. On FurryMUCK, as on LambdaMOO, highly socially involved players can be rewarded with official recognition of their social importance. Deserving FurryMUCK players may be given an ‘Official Helper’s Badge’, a simple MUD object that the character carries around and which identifies him or her as someone to whom players can turn to for help on everything from MUD etiquette to the complexities of building. Special commands have been written into the FurryMUCK program that allow players to view a list of all those who have won such a badge, get information on their areas of expertise, check to see which helpers are currently logged into the MUD, and leave messages for them. Every player who spends some few minutes reading part of the extensive help files available on FurryMUCK will be likely to find these commands and so become aware of who the Official Helpers are. These people are known even by those who have never met them. They are also more likely to become personally well-known to a great number of players as they are paged with questions and pleas for help—one character, known as BoingDragon, has achieved almost legendary status through her tireless efforts to help and advise novice players.

Players of social MUDs who enter into the social and creative acts of the MUD will be likely to become popular and well-known on that MUD. To achieve that status, considerable time must be invested in learning how to use the particular MUD program on which the game universe is based, and in getting to know fellow players. Anyone who does so invest their time will in consequence be likely to continue to become more involved with MUD. Admiration and respect are addictive. The power of popularity is as great as the power to manipulate worlds. People who feel liked and valued in a particular environment will tend to frequent that environment—that holds true as well for MUDs as for any field of human activity. Involvement leads to popularity, and popularity leads to involvement—players who have established themselves as clever builders and resourceful advisers will find that the popularity they have gained in doing so will keep them coming back to the MUD.

As Foucault says, “every point in the exercise of power is at the same time a site where knowledge is formed. And conversely every established piece of knowledge permits and assures the exercise of power. Put otherwise, there is no opposition between what is done and what is said.”[67] On MUDs, and especially social MUDs, where every player can create new game elements, what is said and what is done are one and the same thing. Speaking and writing—transmitting knowledge—encompass all virtual actions. In the beginning of all MUD systems there is only the Word, and the progression of the system from its initial existence as a computer program into a virtual environment habituated by players is the progression of a series of linguistic acts. It is the production of knowledge about the virtual environment which produces the environment itself. This production of knowledge and virtuality powers the socially cohesive body found on social MUDs.

Social Cohesion on MUDs

At the heart of human activity in capitalist, industrialised culture, lies the wish for influence and power. Power can come in many forms, and different forms are attractive to different people. A desire for sheer physical control can lead people into body building and military coups. A desire for respect and fame can inspire actors and politicians. The forms of power that can be exercised on MUDs vary on each system, and most widely between the two genres of MUD. This differentiation is to some extent artificial, and based on averages and general cases. Some Wizards on social MUDs have become so through a wish to have ultimate control over a universe of their own. Some players of adventure-style MUDs are well-known and liked for their willingness to help novice players and to chat and listen to others. But the terms ‘social’ and ‘adventure’ have come to be used because there are, overall, two kinds of MUD. One kind stresses player advancement through the attainment of levels or skills through interaction with the game elements and competition with other players.

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[67] Michel Foucault, *Power, Truth, Strategy*, Eds. Meaghan Morris and Paul Patton, (Sydney: Feral, 1979) 62.

The other stresses player interaction and creativity. The former lends itself to the expression of power through a character's prowess, and the player's resultant powers to affect the game world. Ultimately, players on adventure MUDs strive to help their character achieve a high enough level of expertise to merit their promotion to a position of power over the MUD world. Social MUDs lend themselves more easily to the expression of power through exhibitions of creativity, charm, and knowledge. Almost all social MUD characters have the same powers over the game world—what differentiates them are the ways in which players act through the character to transform the world and to engage other players in supportive relationships.

Each of these different paths to power involve the player in the game. Each takes an initial degree of dedication on which to form a basis for status. Adventure MUD players must play the game a minimum of several hours each week just to stay in the game. To advance within the game the player must play more often than that, and to achieve high levels of expertise he or she must play very often indeed. Once that level has been achieved the player must play often enough to maintain that position, and if he or she aspires to Wizardship it is necessary to demonstrate the skills and dedication for which that promotion is deserved. At each level of play on adventure MUDs, time and involvement are demanded, with the level of demand increasing as does the level of expertise. The higher the level, the greater the rewards. As players advance they gain greater powers over the MUD universe. They become better able to complete dangerous quests within the game world, and are eventually granted the power to manipulate the world itself. For players of social MUDs the rewards are less overtly powerful, although they too can follow a track toward greater, and eventually total, power to manipulate the virtual universe. For most players of social-style MUDs, however, power over the game universe is not an end in itself. That power is freely available, and provides novice players with an immediate reward for playing the game, and so a reason to continue playing. This free expression of creativity becomes the means to power through social influence. Recognition and popularity amongst the players of the MUD are won through the creation of novel additions to the virtual world, and through friendly and helpful interaction with other players. Once gained, this renown keeps a player involved.

On adventure MUDs, dedication to the game, and prolonged interaction with the game universe, is rewarded by the power to become God over that universe. On social MUDs, the power to control the universe is the tool through which to win influence—to create a world in which the player is admired. On social style MUDs cooperation is based on a hierarchy of popularity; on adventure MUDs on a hierarchy of strength. Each form of MUD attracts its own set of players, and evokes in those players a willingness to dedicate themselves to the game. While the ultimate reward on all MUDs is the same, the paths taken to reach it differ between the two main styles of MUD game, the social and the adventurous. Players of each of these two genres of game must contend with widely different paths to deification. Each path contains its own cohesive elements which centre on control and the manipulation of game elements.

Chapter Three:

Identity and the Cyborg Body

MUD systems, with all the factors of anonymity, distance and flexibility brought into play, allow people to say what they want. That freedom is not always exercised to the approval of other players, and social systems which maintain cohesion amongst members of a MUD community have arisen. But the nature of what people do on MUDs does not provide a complete explanation of such systems—the nature of the people is just as important. A player of a MUD system is not a transparent medium, providing nothing but a link between external and internal cultural patterns, between actual and virtual realities. The player is the most problematic of all virtual entities, for his or her virtual manifestation has no constant identity. MUD characters need not be of any fixed gender or appearance, but may evolve, mutate, morph, over time and at the whim of their creator. All of these phenomena place gender, sexuality, identity and corporeality beyond the plane of certainty. They become not merely problematic but unresolvable. If anonymity on MUDs allows people to do and say whatever they wish, it also allows them to be whatever they wish. It is not only the MUD environment that is a virtual variable—the virtual manifestation of each player is similarly alterable, open to change and re-interpretation. The player does not constitute a fixed reference point in the MUD universe. Players do not enter into the system and remain unchanged by it. Players do not, in essence, 'enter' the virtual landscape—they are manifested within it by their own imaginative effort.

In everyday life, our efforts at self-presentation usually assume that we cannot change the basics of our appearance. Physical characteristics, although open to cosmetic or fashionable manipulation, are basically unalterable. What we look like, we have to live with, and this fixity underpins our social institutions. Social structures based on bias toward or prejudice against differing portions of humanity depend on the ease with which we can assess each other's bodies, and ascribe identities to physical form. Male, female, white, black, young, old, poor and affluent are all terms that resonate through our culture, and each depends in part on the fixity of physical form, and our ability to affix meaning to that form. These kinds of assumptions go beyond the level of non-verbal communication—they make up not the outward form of our culture but the substructure of it. Just as we notice—if such an almost subconscious perception can be called ‘noticing’—the gender of our interlocutors before we notice their facial expressions, the symbolism of the body underpins and shapes our culture. On MUDs, however, the body is not an immutable property. How one MUD player ‘looks’ to another player is entirely dependant upon information that they choose to give. The boundaries delineated by cultural constructions of the body are both subverted and given free rein in virtual environments. With the body freed from the physical, it completely enters the realm of symbol. It becomes an entity of pure meaning, but is simultaneously meaningless, stripped of any fixed referent.

The MUD system does not dictate to players the form of their virtual persona. The process of character creation is at all times in the hands, or imaginations, of the player, although different systems may make the process less or more complex.[68] Players may manifest themselves in any way they please, unbounded by the physical measures that limit our self-presentation in actual life. MUD characters are much more than a few bytes of computer data—they are cyborgs, a manifestation of the self beyond the realms of the physical, existing in a space where identity is self-defined rather than pre-ordained. The consequences of this for the sub-cultures that form on MUDs are enormous. They begin with a challenge to the ties between body and self, and lead to subversions of the categories of gender and sexuality which are so dominant in the actual world.

Self-Made People

MUD players create their own virtual personas, their own characters. They create, initially, a name. Their first contact with the MUD program is to direct it to create a database entry which will serve as their window into the virtual universe, the informational node to which they will connect in order to experience the virtual reality

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[68] See the Appendix 7 for examples of simple and complex character creation systems.

contained in a MUD system. Players rarely choose to give their real name to their virtual persona. Most choose to manifest themselves under a name that forms the central focus of what becomes a virtual disguise. These names can be almost anything that the player chooses to make them. They can be conventional names such as Chris, Jane or Smith. In many cases, the names have clearly been borrowed from characters from books, films or television shows—Gandalf, AgentCooper and PrincessLeia. Other names, such as Love, funky, Moonlight and blip, reflect ideas, symbols and emotions, while many more, such as FurryMUCK's felinoid Veronicat and LambdaMOO's yudJ, involve plays upon language and conventional naming systems.[69] The name a player chooses is the beginning point of his or her virtual self. On top of that name, the player builds a virtual body, endowing the new-born and newly-christened database entry with characteristics that mimic actuality. Players attach textual descriptions to those entries, clothing and defining the would-be physical form of their character, giving them possessions, and attaching to them symbols of those aspects of identity to which we give great importance in actual life—characters are gendered, sexed, identified.

The subversion of the body begins in small ways on MUDs. At the least end of the virtual surgery that players may perform upon themselves lies the cosmetic. It is possible to by-pass the boundaries delineated by cultural constructs of beauty, ugliness and fashion. Players can appear to be as they would wish. Such changes that a player might make to his or her perceived identity can be small, a matter of realising in others' minds a desire to be attractive, impressive and popular:

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    Lirra is a short young woman with long blonde hair,
an impish grin and a curvaceous figure.  Her clear blue
eyes sparkle as she looks back at you.  She is wearing a
short red skirt, a white t-shirt, black fishnet
stockings, and black leather boots and jacket.

    Lirra whispers, "my desc is pretty real, but I'm a
bit plumper than that" to you.
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69 These names have been selected from the character lists of the four MUDs which I have concentrated on in this thesis.

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     Lirra whispers, "and maybe i don't always wear such
  sexy clothes ;)" to you.[70]
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Such manifestations remain within the realm of the bodily constructs with which we are familiar in actual life. They may enable the player to side-step the normal requirements of entry into glamour, but they do not subvert the concept. Rather, such descriptions call upon our pre-conceived notions about the human appearance to sustain their power. They do not free players from the shackles of the beauty myth, but they allow them to redefine themselves in accordance with that myth.

Beyond the bounds of beauty, other players shape their virtual selves to emulate the signs of influence and affluence which we pay heed to in our actual lives. Such characters are usually beautiful, but their beauty is at most a setting, the background for social status rather than the reason for it:

```
     Darklighter
     A lean Man standing a metre 73, weighing about 70
  kilos.  His hair is golden brown with hints of red, the
  frame his angelic face.  Deep set are two emerald eyes
  that peer back at you.  His vestiage is all in black
  with a cloak concealing him.  You see on his right hand
  an emerald colored ring of peculiar origin.  You realize
  that it is that of a Green Lantern.  You can tell he is
  the sort of man who can see the strings that bind the
  universe together and mend them when they break.[71]
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At the core of such characters is their possession of influential and even superhuman attributes. Curtis describes this phenomenon in player description as simply being a case of wish-fulfilment—"I cannot count," he says, "the number of 'mysterious but unmistakably powerful' figures I have seen wandering LambdaMOO."[72] In many cases this may be true—certainly the majority of people in everyday life are neither as extraordinary nor as powerful as many MUD characters present themselves to be. However, it must be remembered that their personal description is the only method open to players to substitute for what, in everyday life, would be a complex mixture of non-verbal social context cues such as accent, dress and race. If many descriptions

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70 From a log taken of a session on LambdaMOO on July 10th, 1992. The name of the player concerned has been changed at her request.
71 From a log taken of a session on LambdaMOO on January 17th, 1992.
72 Curtis, 29.

show exaggerated, even fantastical, attempts to indicate social acceptability, it is at least in part a reflection of the degree to which players feel it necessary to compensate for the lack of non-textual communication channels. Without reference to the senses on which we normally rely to provide information, such socio-emotional cues must be made explicit in textual descriptions. The social information usually spread out over several different sensual channels is concentrated into one channel and therefore exaggerated.

Whatever the reasons for such cases of virtual cosmetic surgery, be they dramaturgical or egoistical, their effect upon the MUD universe is to free it from conventions of power that rely on physical manifestation. When everyone can be beautiful, there can be no hierarchy of beauty. This freedom, however, is not necessarily one that undermines the power of such conventions. Indeed, such freedom to be beautiful tends to support these conventions by making beauty not unimportant but a pre-requisite. The convention becomes conventional—MUD worlds are free from the stigma of ugliness not because appearance ceases to matter but because no one need be seen to be ugly. The cosmetic nature of virtual worlds is, however, the least of their ability to operate upon our physically-centred prejudices. In the realms of gender and sexuality, MUD systems go beyond the escapist and become creative.

Ungrounding Gender

Of the cultural factors that are most important in encounters in Western society—typified by the big three of gender, race and class—all may be ‘hard-coded’ into MUD programs. Race and class are generally the least problematised of these three, and their representations offer a link between the cosmetic and the radical ends of cultural surgery. Race and class on MUDs are generally the concern of systems that are adventure-oriented, and the choices available are likely to be within the realms of fantasy. Choices of race are more likely to be between Dwarvish, Elvish and Klingon than between Asian, Black and Caucasian; choices of class are more likely to be between Warrior, Magician and Thief than between white or blue-collar. This essential racial and class blindness is very likely the effect of the pre-selection criteria which the actual world places on those who would have access to the Internet. MUD players are necessarily people who have access to the Internet computer network. They are most likely to live in the industrialised and largely English-speaking countries that form the greater part of the Internet. They are also most likely to be either employed by an organisation with an interest in computing, or be attending an educational institution. People who fit these requirements are overwhelmingly likely to be affluent and white.[73] Uniformity decreases visibility, and thus for a large percentage of players, race and class are taken as a given and so seem to be invisible.

Gender, however, is brought very much to the fore on MUDs. All MUDs allow—and some insist—that players set their 'gender flag', a technical property of MUD characters that controls which set of pronouns are used by the MUD program in referring to the character. Most MUDs allow only three choices—male, female and neuter—which decide between the families of pronouns containing him, her or it. A few MUDs demand that a player select either male or female as their gender, and do not allow a player with an unset gender flag to enter the MUD. Other MUDs allow many genders—male, female, plural, neuter, hermaphrodite, and several unearthly genders lifted from the pages of science fiction novels. It is obviously easy for players to choose to play a character with a gender different from their own. At least, it is technically easy, but not necessarily socially easy since there is a lively controversy surrounding the issue of cross-gendered playing. The subject is one that regularly recurs on the Usenet newsgroups relating to MUDs. Indeed, the times when the topic is not being debated are far outnumbered by the times when it is—it is a subject that evokes strong feelings from a very large number of MUD players.

Almost without exception such debates begin with the instance, either actual or hypothetical, of a male player controlling a female character. It is very rare for the reverse situation, that of a woman playing a man, to be brought up, at least in the first

[73] Many Asian countries (including Japan, Malaysia, Taiwan, and Thailand) are represented on the Internet. However the different computer platforms needed to transmit and receive Asian and Roman character sets often mean that users from Asian and Western countries are, unless they are able to arrange special access to the appropriate platforms, unlikely to meet on any common virtual ground.

instance. This one-sidedness runs in parallel to a common claim that male-to-female cross-gendering is far more common than the reverse, a claim that rests in part on the notion, common lore amongst MUD players, that most of their number are in fact male. This may well be so. The cultural pre-selection process which ensures that most MUD players are white and affluent is also in operation in defining the sex of the average player. Although the gap is slowly closing, most people employed as computer programmers and computer engineers are male, and most of the students likely to have access to the Internet (those studying Computer Science, or Software Engineering) are also male. It is therefore quite likely that the folklore on the subject is correct, and that the majority of MUD players are male.[74] Since female and male presenting characters are about equally common, it follows that some of those female characters are controlled by male players.

Whether or not most players are male, the one-sidedness in the cross-gender debate is strongly related to players' perception of women as being the minority of their number, and to notions of gender-specific behaviour found in the external culture. Female-presenting players are treated very differently to male-presenting players. They are often subjected to virtual forms of those two hoary sides of a male-dominated society—harassment and chivalry. The latter can give female characters an advantage in the game world. Players newly connecting to a MUD system will inevitably require help in navigating the virtual terrain, and in learning the commands particular to that system. Players who present themselves as female are more likely than their male counterparts to find help easily, or to be offered it spontaneously. On adventure-oriented systems, in which the goodwill of other players can mean the life or death of a character, female-presenting characters are likely to be offered help in the form of money and other objects helpful for survival. This special treatment is not always, however, meted out in a spirit of pure altruism. Players offering help, expensive swords and amulets of protection generally want something in return. At the least, they might expect to be offered friendship; sometimes they may expect less platonic favours to be showered upon them.

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[74] In the survey carried out on LambdaMOO, 76.6% of respondents claimed to be male in real life and 23.4% claimed to be female.

Sex is, of course, at the root of this special treatment. As well as being white and male, the average MUD player might be likely to be young, since the Internet primarily serves educational institutions and thus students who are generally in their late teens or early twenties.[75] Such young people might well be expected to engage in romantic and sexual exploration, and the anonymous virtual environment allows this kind of exploration a safety that could only make it all the more attractive a site for it. It is hardly unusual for young people to utilise social situations to form relationships with members of the appropriate sex; since MUD systems provide a social environment it is not surprising that they are sometimes used in such ways, and successful liaisons can be intensely felt and emotionally fulfilling. Romantic attentions are not, however, always welcome or appropriate. In cases where they are not, the attention paid to female-presenting characters can fall into the realms of sexual harassment. As I have described, aggression can as easily be played out on MUDs as can affection. The sexual harassment of female characters is not uncommon, and is often closely tied to what may begin as a chivalrous offer of help, as this adventure MUD player describes:

> I played a couple of muds as a female, one making up to wizard level. Other players start showering you with money to help you get started, and I had never once gotten a handout when playing a male player. And then they feel they should be allowed to tag along forever, and feel hurt when you leave them to go off and explore by yourself. Then when you give them the knee after they grope you, they wonder what your problem is, reciting that famous saying "What's your problem? It's only a game".[76]

For others the cry of "it's only a game" is itself justification for permitting cross-gendered playing:

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[75] The results of the LambdaMOO survey indicated that the mean age of players was 23.6, the median age was 21, and the greatest number of players (90) claimed to be 19. 50% of players claimed to be aged between 19 and 23. The youngest age given was 12 and the oldest 54.

[76] From: djohnson@elvis.ucsd.edu (Darin Johnson); Newsgroups: rec.games.mud; Subject: Re: MUD practical jokes?; Date: 27 Jan 92 20:27:50 GMT

> I just paged through about 15 articles on this cross-gender topic. GEEZ guys get a life. Who cares if someone playes a female or male character and who cares what sex they are in real life! This is a game, and if someone enjoys playing the opposite sex, so what.[77]

However, and despite claims such as this one, for most players gender is of great moment, far more so than the imagined race or profession of the player. The simple fact is that no player presenting him or herself as a Dwarvish warrior-mage is likely to be one in actual life, but a female or male-presenting character could be controlled by a player of that sex. There is no cause for branding role-playing a Dwarf as deception when a reasonable person could not truly be deceived; it is only where virtual existence holds close parallels to actual life that the possibility and accusations of deception enter the equation. The ethics of this kind of ‘deception’ are subject to debate amongst MUD players. Opinion is sharply divided. Some players feel that cross-gendering, particularly in the case of male players controlling female characters, is a despicable and even perverted practice:

> Well, I think it *is* sick for guys to play female characters. Most only do it to fool some poor guy into thinking he’s found the lady of his dreams, and then turn around and say “Ha! Ha! I’m really male!” Real mature. I think if you get off on pretending to be female you should go and dress up and go to some club in San Fran where they like perverts—just don’t go around deceiving people on muds.[78]

There are three issues which those who oppose cross-gendering are concerned about. Firstly, they feel that it is ‘cheating’ for a male player to take advantage of the favouritism and chivalry that is commonly showered upon female-presenting players in order to get special privileges in the game. Secondly, many feel that such impersonations are, by virtue of being ‘lies’, unethical. Lastly, many players obviously feel very uncomfortable and at a disadvantage in interacting with others whose gender is unclear, and feel even more discomforted on discovering that they have been interacting under false assumptions.

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[77] From: anonymous; Newsgroups: rec.games.mud; Subject: Cross-gender thing!; Date: 4 Mar 92 00:16:30 GMT

[78] From: anonymous; Subject: Re: Gender Issues: “Real World” Warning; Newsgroups: rec.games.mud; Date: 4 Jun 92 08:27:53 GMT

For some, this is where cyberspace ceases to be a comfortable place. We are so used to being provided with information about each other's sex that the lack of it can leave many players feeling set adrift. Gender roles are so ingrained in our culture that for many people they are a necessity, and acting without reference to them seems impossible. Many people are simply unable to negotiate social encounters without needing to fix, at least in assumption, the genders of their interlocutors. It is indeed a truly disorienting experience the first time one finds oneself being treated as a member of the opposite sex. My own forays into the realm of virtual masculinity were at first frightening experiences. Much as some of us may deplore what we see as the negative sides of our culture's sexual politics, we are brought up to align ourselves with gender-specific social navigation mechanisms. Once deprived of the social tools which I, as female, was used to deploying and relying on, I felt rudderless, unable to negotiate the most simple of social interactions. I did not know how to speak, whether to women or to 'other' men, and I was thrown off balance by the ways in which other people spoke to me. It took much practice to learn to navigate these unfamiliar channels, an experience that gave me a greater understanding of the mechanics of sexual politics than any other I have ever had.

For some players it is precisely this chance to swim unfamiliar seas that attracts them to cross-gendered playing. If it had not been for my intellectual interest I would probably not have persevered with my attempts as male self-presentation since it was often stressful and bewildering. Others, perhaps more adventurous and less self-conscious than I, claim this as the most rewarding aspect of virtual existence. The chance to see how the other half lives is enjoyed by many as liberating and enlightening, as is the opportunity to take a holiday from the confines of one's actual gender. The demands of masculinity, or femininity, can be daunting to those not brought up to them, and even those who are can appreciate the chance to side-step them:

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Melina says, "What I really liked about having a female
character was that I didn't have to do all the masculine
bullshit—all the penis-waving."
Melina giggles.  "Penis-waving... I love that phrase..."
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> Melina says, "I could just chat with people! It was great! No having to compete, no *pressures*, no feeling like I'd be made fun of for talking about my feelings."[79]

The ability to adopt and adapt to the erosion of gender requires a great deal of cultural and psychological flexibility. At its best it might help those who can play this game to understand the problems experienced by actual members of the opposite sex. Men who have experienced first hand the kinds of sexual harassment that for women has often been, as Gloria Steinem described it on a televised interview, "just part of life", may be less likely to perpetuate the social structures that enable such harassment. At the same time, such virtual fluidity acts to erode the places from which many of us speak. What, for instance, will it mean for feminist politics that in cyberspace men can not only claim to speak for women, but can speak *as* women, with no one able to tell the difference? The subversion of gender is not always a happy or enlightening experience. The problematising of identity, and of the speaking positions which are so crucial to our politics aside, many cross-gendered players experience the opposite of liberation—they are caught in a backlash against it:

> There are also those who think it is an abomination to be playing a character of a different gender... and if it becomes known that a female character is actually being played by a guy, some of these guys will hunt down and kill the female character repeatedly for the "crime" of being a genderbender.[80]

The tools utilised by MUD players to enforce and maintain social structures and social coherence can be used to support any number of different ethical and moral systems. If methods of enforcing such systems can be called into effect in an effort to shore up the virtual holes in players' perceptions of traditional gender roles, they can also be used to enforce a different kind of 'political correctness':

> I am female. I choose to play female chars on muds. And people do harrass you. Its not just casual convo or compliment. I stopped playing muds where playerkilling is not legal. People tend to value there characters. If they really start harrassing you, you, or some other

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[79] From a log taken of a session on FurryMUCK on June 21st, 1993. The name of the player has been changed at 'her' request.

[80] From: dst@hardy.u.washington.edu (Trif); Newsgroups: rec.games.mud.admin; Subject: Re: sex roles; Date: 21 Nov 1993 22:59:27 GMT

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high level, killing them a few times tends to stop it
short.  On the muds i play im happy to kill people for
harrassement [...] But i went on a few no pk muds recently
and it was costant harrassment.  I was getting tells
like "How big are your tits" or "You want to mudfuck"
which is reallly annoying.  So to the females who have
problems, head to the player killing muds where you can
avenge yourself...[81]
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The structure of MUD programs destroys the usually all but insurmountable confines of sex. Gender is self-selected. This freedom opens up a wealth of possibilities, for gender is one of the more ‘sacred’ institutions in our society, a quality whose fixity is so assumed that enacted or surgical reassignment has and does involve complex rituals, taboos, procedures and stigmas. This fixity, and the common equation of gender with sex, becomes problematic when gender reassignment can be effected by a few touches at a keyboard. MUDs become the arena for experimentation with gender specific social roles, and debate over the ethics of such experimentation. The flexibility of self-presentation provided by MUDs makes it possible for players to experiment with aspects of behaviour and identity that it would not normally be possible to play with. Players are able to create a virtual self outside the normally assumed boundaries of gender, race, class and age. The possibility of such experimentation governs the expectations of all players of MUDs. Some find the lack of fixity intimidating; others show a willingness to accept this phenomenon, and to join in the games that can be played within it. Whether an individual player enjoys the situations that come of this potential, or is resentful and wary of them, exploitation of it is an accepted part of the MUD environment. Most players seem to be aware, and some have learnt through bitter experience, that not all characters reflect the identity of the player. MUDs challenge and obscure the boundaries between some of our most deeply felt cultural significances, and force the creation of new cultural expectations to accommodate this.

MUDs both erode gender and bring it to the fore. In the instant that a player assigns a sex to his or her character, that split has been recognised. The need for conscious assignment makes gender meaningless as a reference point in some claimed reality, but

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[81] From: valkyrie@shell.portal.com (Kristen—Taylor); Newsgroups: rec.games.mud.misc; Subject: Re: Muding Girlfriends?; Date: Fri, 10 Dec 1993 03:09:47 GMT

it also marks it as a vital cultural referent. On MUDs sex and gender are subverted by the whims of imagination. The attributes and social options society allocates each gender offer both negative and positive experiences. The chance to experience life on the other side of what is usually an all but insurmountable divide can make the MUD world into a stage for inventive and subversive cultural games. At their most liberal, systems where this playful subversion is an accepted by-product of virtual existence can be dynamic and challenging places.

Nevertheless, as Stone has also noted, the gender-specific roles that our culture prescribes have not been changed by this virtual freedom from the shackles of gender, but the rules delineating who may use which social mode have been clouded. The appropriation of the other is an accepted, though not always liked, feature of the virtual terrain. The virtual colonisation of the body of the other in the often culturally uncharted waters of the cyberspatial frontier, to offer a mix of landscapes and similes only possible in virtual reality, is commonplace. Gender is divorced from the body, and given a purely social significance. The man who can behave as a woman, and the woman who can behave as a man, are virtually accepted as legitimately owning such presented identities. The cyborg entity, to paraphrase Sylvia Plath, walks wary though the virtual landscape, sceptical of the ‘real world’ significance of what is culturally signposted, yet politic, amenable to the games played within that space. The gendered subject is separated from the sexed body, if not finally divorced from it. MUDs do not grant a *decree nisi* to the gender roles that permeate our social existence, but they do offer equal opportunity casting.

Cyborg Sexuality

Stone tells us that, in describing the act of computer-mediated communication, people she had interviewed would “move their hands expressively as though typing, emphasising the gestural quality and essential tactility of the virtual mode.”[82] Communication through the fingertips rather than through sound, a necessarily tactile connection, a social touch, albeit one distanced by computer cable, is the breed of

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[82] Stone, 90.

sociality expressed on MUDs. The pose command and the feelings commands are the most richly used of all those communicative tools available on MUD systems. This obsession with the physical in a non-physical environment is hardly contradictory—a consensual hallucination is, after all, in part a sensual hallucination. Spanning the senses as well as the imaginations of the participants, MUDs are as grimily sensual as their name suggests, and can be a stage for sexual expression.

FurryMUCK is one of the most popular social MUDs on the Internet, and one that has a reputation for being rampant with sexual activity. I cannot say whether this is deserved or not—MUDsex seems to happen on all systems, and it is impossible for me to say whether it is more or less common on FurryMUCK. However, questions of social and sexual identity, and of the unfixed and unfixable nature of the cyborg body, are prominent on FurryMUCK. The very theme of the MUD draws these questions to the fore, for every character on Furry is inhuman, and most are anthropomorphised animals clad only in virtual fur. Cats and bears are legion, most of them sleek-furred and svelte or broad and brawny. The nature and culture of the body is the primary theme of FurryMUCK, and the ideal is animalistic allure. Sexuality is a vital aspect of this kind of cyborg body, and most character descriptions reflect this. There are few 'mysterious but powerful' mage-warriors on FurryMUCK, but many flashes of velvet-pelted thighs, glints of slitted pupils and touches of sharp-taloned paws.

'Touches' is indeed the operative word. FurryMUCK is by far the most 'physical' of the MUDs I have encountered. There is much back-scratching, fur-patting, hugging and kissing between Furries, that being the name by which they are both called and self-identified. This virtual touching is rarely overtly sexual when performed in the more public areas of the FurryMUCK world. It is always affectionate, and indeed FurryMUCK is one of the most friendly MUDs I have used. Nevertheless, beneath the affectionate snugging and purring is a strong undercurrent of revelry in the decidedly beautiful and sensual nature of Furry bodies. If one looks for them, areas where semi-public sexual play is common are not hard to find. The FurryMUCK hot-tubs are both popular and well sign-posted with warnings about the nature of the behaviour both allowed and to be expected inside them. The Truth or Dare games played in their own specially designed and, again, signposted, areas are a deliberate invitation for sexual expression. Just as the games of Truth or Dare played by actual humans, as many adolescent memories will attest, nearly always concern themselves with questions about desires and dares to act on them, so do the games played by Furries.

The mechanics of sexual activity on MUDs are very simple. It is a form of co-authored interactive erotica. The players involved in a particular virtual sexual act type out their actions and utterances:

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Arista continues to nip little kisses back down your
neck.
Pete mmmms, his hands stroking a little at your sides.
Arista presses her body to yours, rubbing herself like a
cat over you.
Pete groans softly, laying back on the long seat,
writhing softly under you.
Arista moves her mouth down over your chest slowly.
Arista plants open mouth kisses over your left nipple as
she flicks her tongue over it gently.
Pete's body arches up towards your mouth, softly.[83]
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From all accounts MUDsex can be a lot of fun for the participants, and many a crude reference has been made in the MUD-related newsgroups as to the manner in which it improves a player's ability to type one-handed. Beyond its mechanics MUDsex—or tinysex as it is often called, in erroneous implication that most of it occurs on social-style MUDs—is not at all simple. MUDsex falls into a realm between the actual and the virtual. Players can become emotionally involved in the virtual actions of their characters, and the line between virtual actions and actual desires can become blurred.

Virtual sex is the least and the most expressive of virtual interactions. In its descriptions of purely would-be physical interaction, it is the least overtly cultural of interactions. It draws most heavily on external cultural factors in its dramaturgical nature, and it is without doubt among the most dramatically affective of virtual happenings. Real desire and arousal are evoked between participants, a reaction hugely dependant upon each person's external cultural experience. As Stone

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[83] From: jadawin@world.std.com; To: emr@ee.mu.oz.au; Subject: 141 lines...pick a few; Date: Mon, 3 Jan 94 8:05:03 EST.

describes the relationship between phone sex workers and clients, the speaker—or typist—textually codes for gesture, appearance, or proclivity, and expresses these as tokens, sometimes in no more than a smiley, and the listener, or reader, uncompresses the tokens and constructs a dense, complex interactive image.[84] In these interactions, Stone continues, "desire appears as a product of the interaction between embodied reality and the emptiness of the token."[85] That emptiness is filled with the cultural and personal expectations of the virtual lovers—good cybersex consists of the empathetic understanding of and response to the cultural symbols represented by a partner's symbolic tokens. Such descriptors are loaded with assumptions and meanings; that they can be transmitted along with the text is a tribute not only to the linguistic skill of the interlocutors but to the facility of the virtual medium for such dramatic and intimate play. The human body is represented through narrow bandwidth communication in all its culturally laden fleshiness through the coding of cultural expectations as linguistic tokens of meaning. Desire is no longer grounded in physicality in cyberspace, in triumphant confirmation of the thesis that the most important human erogenous zone is the mind. MUD sex may never replace actual sex, but it does provide some erotic satisfaction to those who participate in it.

"Textuality as striptease" is no longer just a jibe directed by the script writers of the BBC production *Small World* at a particular breed of American postmodern cultural critics.[86] The textual nature of MUDs strips the confines of a particular body from players, and allows them the freedom to play with, in and through any body they desire. Cyborg bodies are not, as Stone claims, "preorgasmic".[87] The "erotic ontology of cyberspace" lies most clearly in its concentration of the erogenous into the imaginative.[88] Cyborg bodies are, in many ways, superior to their actual counterparts. They cannot tire, stumble, or subject their inhabitants to any of the

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[84] Stone, 103.
[85] Stone, 103.
[86] For those who have not seen this hilarious series, it followed the adventures of a naive young Irish poet as he accompanied three seasoned academics on the literary conference circuit. These three academics each gave exactly the same paper at each conference: the American Postmodernist speaking on "Textuality as Striptease", the English Traditionalist speaking on "The Love of Books", and the European Marxist giving a "Criticisme of Capitalisme."
[87] Stone, 104.
[88] This phrase has been taken from Michael Heim, "The Erotic Ontology of Cyberspace," *Cyberspace: First Steps*, Ed. Michael Benedikt, (Cambridge, Mass.: The MIT Press, 1991).

embarrassments or failures that flesh is prone to. Thus cyborg sex is a concentration of the erotic, a purifying of prurient imagination, a romantic idealisation of sexual encounters worthy of the most airbrushed Hollywood art.

The Cyborg Self

Cyborgs are born out of virtual sex. At the moment of virtual orgasm the line between player and character is the most clouded and the most transparent. Who it is that is communicating becomes unclear, and whether passion is being simulated on or transmitted through the MUD becomes truly problematic. Born from primeval MUD, these cyborgs redefine gender, identity and the body. In this part of cyberspace, a place as far divorced from the natural world and the animal, as far from the flesh as human inventiveness can get, the lines between the animal and the conscious are erased.

FurryMUCK seems almost too good for cultural analysis to be true—an imaginary world populated by conscious animals consciously sensualised, all represented by pure linguistic symbolism and represented within the confines of electricity, silicon and magnetism. At the margins of physicality, these Furry cyborgs play with the margins of sexuality. They have none of the boundaries of the actual to confine them. They may take on any physiology that passion and imagined convenience invites. Any configuration of human and animal components may be mixed to create as many sexual possibilities as can be imagined. Bisexual, multisexual, polysexual—they can be all, but always consensual. For the players there is always the off-button; for the cyborg characters, implements of sensual overload are as controlled or as uncontrolled, as gentle or as cruel, as the simulation demands. Perversion is as common on MUDs as in the 'real world', but in cyberspace perversion can be perverted into any form. In the dim recesses of Internet cyberspace, there are MUDs, known only by word of mouth—or touch of keyboard—with themes as controversial as that of any specialist brothel. Kinks of any kind can be found if looked for, all bent to the demands of the cyborg entities who portray them for the amusement of the humans shadowed behind their technologies. FurryMUCK is the lightest side of this twisting of cyborg gender and sex—the fluffiest and the snuggliest. Darker cyberspaces can be found, painted not in cartoon colours and textured with fur, but depicted in the dark techno-organicism of H. R. Giger and texted with all the danger and poetry of Pauline Reage.

The cyborgs on MUDs do not, as Donna Haraway suggests in her *Cyborg Manifesto*, have “no truck with bisexuality, pre-oedipal symbiosis... or other seductions to organic wholeness”.[89] Although, in partial confirmation of Haraway’s comments, they are literally the illegitimate offspring of militarism and patriarchal capitalism—of the US Department of Defence and the bastions of higher education—MUD cyborgs do not reject the labels of the father culture. There is no escape from labelling for these cyborgs—they are constructed entirely from the most evident of labels. Their commitment to “particularity, irony, intimacy and perversity” is expressed through the flaunting of cultural symbols and the literal inscription upon their virtual bodies of the signs of who they want to be.[90] Transsexual, transvestite, bisexual, superhuman and anthropomorphic—MUD bodies can embrace and be embraced by each of these richly coded definitions.

At the heart of this play with identity is always the question of how dichotomous cyborg and actual identities are. Where are the lines drawn between representation, simulation and actualisation? How far do genuine feelings draw virtual actions into the realm of the actual? These are questions for the legislators and philosophers of our new computerised world, and not questions that will be answered easily, for the one constant of cyberspatial existence is that it is different for everyone. Current political and legal trends, with talk of ‘hostile environments’ and ‘hate speech’, may lead to the notion that biotechnological politics move beyond the regulation of actions upon the body and into actions upon the spirit. The ultimate reduction of the physical—the microelectronic—may become the realm of the disembodied spirit. If criminality, or even immorality, can be discovered in cyberspace it will entail a greater

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[89] “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century” is contained in Chapter Eight of Donna Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature*, (London: Free Association Books, 1991). This quotation is taken from page 150.

[90] Haraway, 151.

recognition of amorphic harm. The most intimate of MUD interactions already involve that recognition. Negotiation, and behind-the-scenes direction, almost always ride in tandem with expression. In the mechanics of the act, cyborg lovers whisper messages between their players, directing what is acceptable and what is not, defining and creating the virtual experience with determination and consent. The most highly practised inhabitants of MUD spaces make their intentions and desires clear. Flirtation is more highly specified than it is in the pubs and parties of the ‘real world’. Raised eyebrows and tilted cigarettes are replaced by direct requests. This is cyberspatial intimacy at its best.

These cyborgs do not exist in a “post-gender world.[91] They are only quasi-disembodied. They do not attempt to posit their identities as amorphous, but instead revel in the possibilities of body-hopping. Play is not with escape from the claims of the flesh, but with the cultural meanings attached to different bodies. The adoption of masculinity, femininity, androgyny, animality or the more fantastical meanings attributed to fictional races or genders, is as easily accomplished as might be the donning of a new set of clothes. Thus clothed in the borrowed trappings of other’s cultural expectations and imaginings, cyborg selves interact in fashions that are based both on superficial appearances and on an acceptance of whatever the individual wants to be. They do not reject gender, or any other signs of identity, but play a game with them, freeing symbols from their organic referents and grafting the meanings of those symbols onto their virtual descriptors.

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[91] Haraway, 150.

Conclusion:

Cultural Formations in Text-Based Virtual Realities

Traditional forms of human interaction have their codes of etiquette. We are all brought up to behave according to the demands of social context. We know, as if instinctively, when it is appropriate to flirt, to be respectful, to be angry, or silent. Words do not express the full extent of our cultural and interpersonal play. The greater part of our interaction is expressed through signs and symbols—in tone and nuance, in styles of dress, in postures and facial expressions, in rules and traditions. Smiles, frowns, tones of voice, posture and dress—Geertz's "significant symbols"—tell us more about the social contexts we are placed in than do the statements of the people we socialise with.[92] Physical context is a part of social context—place and time are as much loaded with cultural meaning as are dress and gesture. Words, as we use them in everyday life, are insufficient to create a context for our existence. It is the scenery, props and action that complete the social stage. On MUD systems, however, these structures for communication are dismantled. The conventions that we are accustomed to rely on are not present in these virtual realities. The environmental cues that feed us our cultural lines become ambivalent and problematic. Communication and cultural context must be expressed through new channels, and new systems of meaning must be forged by virtual denizens who wish to make sense of and to one another.

The medium itself blocks some of the social constraints that players would, under other circumstances, be operating within. Cultural indicators—of social position, of age and authority, of personal appearance—are relatively weak in a computer-mediated context. They might be inferred, but they are not evident. MUD systems leave it open to users to create virtual replacements for these social cues. Interaction

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[92] Clifford Geertz, *The Interpretation of Cultures: Selected Essays (*New York: Basic Books, 1973) 45.

on MUDs involves the creation of replacements and substitutes for physical cues, and the construction of social hierarchies and signifiers of authority. The results of this creation are self-regulating communities that include systems of hierarchy and power that allow for the punishment of disruptive members. The textual replacements for context cues utilised on MUDs are the tools of interpretation that enable players both to overcome the cultural problems created by their environment, and to create unique environments that house their own specialised cultural understandings. These tools, these symbols, constitute cultural knowledge. It takes specialised knowledge and dramatic skill to create a social presence on a MUD. With practice and with these skills MUD players form communities which enable members to form close attachments, and to regulate and punish disruptive members. The objects in this virtual environment serve as the stage on which these cultural plays are enacted—houses and toads facilitate the marriages and public trials which are the virtually physical manifestations of players' common cultural understandings. MUD systems contain communities that are "created through symbolic strategies and collective beliefs."[93]

MUD players share not only a common virtual environment, but also a common language and a common textuality. Within the context of the former, the latter two allow MUD players to make sense of one another despite the limitations of the medium in which MUDs exist. MUD players share a stage, and share an understanding of the rules and ways of breaking rules that allow them to speak meaningful lines. They are able to read each other in far more than a textual fashion. With inventiveness and lateral thinking has come a set of understandings and symbols that allow MUDs to become a social environment. Within this environment, MUD players experience human dramas as strongly as they might in actuality.

These communities are by no means idyllic. Free expression may be encouraged by the disinhibiting nature of the medium, at least in the early stages of play, but that is not always as socially constructive that many liberal ideologies would claim it to be.

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[93] Gordon Meyer and Jim Thomas, "The Baudy World of the Byte Bandit: A Postmodernist Interpretation of the Computer Underground," electronic manuscript. Originally published in F. Schmalleger ed., *Computers in Criminal Justice*, (Bristol, Indiana: Wyndham Hall, 1990).

Free expression allows not only the voicing of views that might be ‘politically correct’, but also of ‘hate speech’. All sides of any social or political debate can find a voice on MUDs, and so the social characteristics of MUD systems vary widely. Some, like FurryMUCK, provide an environment that some would call liberated and others perverse. Other systems provide environments that uphold that breed of ‘family values’ generally promoted by the more conservative elements of the political spectrum. This diversity is the key to characterising virtual environments. In themselves, they are amoral—virtual reality is a promiscuous tool, capable of reflecting any environment imagined. In compensation for the sometimes anti-social effects of disinhibition there exist methods of preventing and punishing behaviour which could pose a threat to the delicate balance of understanding on which MUD communities exist. Technical measures have been built into the MUD program to deal with disruptive players, and social conventions that act to exclude and punish have been developed. Both technical and social sanctions rely on a social hierarchy that is based on relative degrees of control over the virtual universe.

Within this ambivalent virtual space, notions of human identity and existence are problematised. MUD characters have no actuality, only virtuality. They are never immutable. MUD characters are not fixed and they are always in the process of redefinition. They are cyborgs—entities made up of ones and zeroes and imagination, without bodies and without physical restrictions in the virtuality they inhabit. Erik Erikson writes that “the playing adult steps sideward into another reality.”[94] On MUD systems the games that are played involve not just a stepping into but the creation of another reality, the creation of virtually physical contexts, and the emergence of new forms of being. The virtual environments designed on MUDs exist not in the databases and computer networks that make up these systems, but in the ways in which players can use those technologies to realise what they have imagined, and to explore the results of other players’ imaginings. The program mediates between the players’ imaginings and their realisation in a form that can be experienced by others. MUDs allow each player to design and interact with computer-generated objects that are imbued with cultural meaning by the players who have created them.

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[94] Erik Erikson, *Childhood and Society*. New York: W. W. Norton & Company, 1985) 222.

The objects in MUD universes are treated as if they had the properties of the everyday counterparts. Houses are lived in, roses are smelt, food can be eaten and other players can be kissed.

MUD systems problematise the selfhood of their players. In MUDs, the player is in two places at once. The body is on the actual world, but, as Stone describes, the social delegate, the 'I' that belongs to the body, is in an imagined social space enabled and constructed with the assistance of the particular technology of the MUD program.[95] Such technology is a device which mediates between the physical and the imagined. It is an interface between the imagined world and the world of the body. In social terms, as Stone continues, virtual reality is an interface that mediates between the human body and an associated 'I'.[96] It is in the spaces between the body and the self that cyborgs exist. Such entities are a simulation, an approximation, of the physical, untrammelled by the confines of the flesh. In the virtual universe, biological sex is separated from imagined gender and physical sex is separated from the erotic imagination.

The designers of an early military simulation system, SIMNET, a product of the (now thought to be) low-tech early '80s, believed that it was the technical simplicity of their creation that made it so compulsively addictive to those military personnel who had the opportunity to play wargames in its virtual spaces. SIMNET's designers believed that the low resolution of the graphical data that made up the virtual manifestation made it all the more engaging, since it required that "the participants actively engage their own imaginations to fill in the holes of the illusion."[97] This 'suspension of disbelief', this immersion of disbelief in the imagined and imaginal, is what enables a MUD program to become a social and cultural environment. The MUD program allows what is imagined by players to be controlled and channelled into meaningful cues upon which other players can base their actions. The imagination of each player creates the context in which all other players can act. The virtual scenery provides the dramaturgical cues which tell each player what actions are possible within the MUD

[95] Stone, 87.
[96] Stone, 87.
[97] Stone, 93.

world. The more willing each player is to invest his or her imagination in creating objects and descriptions, the richer and more successfully dramaturgical the environment and the player's experience will be. The MUD program serves to actualise what is imagined by one player in ways that become 'real' to others. The process through which players take the MUD program is one of transforming the "thin abstracted space of the machine into a culturally thick" and emotionally concrete world.[98]

The virtual environments created on MUDs are both cultural products and cultural entities. The systems of meaning and context that are created on MUDs are the result of a need amongst players for a set of cultural understandings in which to define both themselves and their actions. Those meanings and contexts serve to create a cultural system which substitutes for, and is distinct from, the shared networks of meaning of the wider community. These cultural systems become the means to perpetuate and regulate the integrity of the MUD environment. The virtual nature of the MUD world lies in its culturally symbolic identity; the unique cultural understandings found on MUDs lie in the specialised meanings that allow the communication of imagined realities. Interaction and experience in this virtually real corner of cyberspace produces a cultural space that is deeply textured in its textuality and richly imagined in its manifestation.

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[98] Vivian Sobchack, *Screening Space: The American Science Fiction Film* (New York: Unger, 1987), quoted in Stone, 106.

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Appendices

This section contains a number of Usenet articles, items of electronic mail and extracts from MUD session log files which, while too long to quote in the body of my thesis, offer valuable (and often amusing) insight into MUDs.

Appendix One: The Vanishing Room

From rec.games.mud Sun Jan 26 18:40:02 1992
From: djohnson@elvis.ucsd.edu (Darin Johnson)
Newsgroups: rec.games.mud
Subject: Re: MUD practical jokes?

>Has anyone ever pulled some neato practical jokes on Muds, whether it be tricking
>people into paging other people through spoofed pages, giving newbies fake rules
>on how to play, etc?

Well, I had a bit of an elaborate one a couple of us pulled on our number one wiz Horvendile (I'm number two, so I can get away with it sometimes).

Anyway, we were talking about putting a casino in somewhere, however, I was not too fond of this idea right off, since every other mud has some dorky place to gamble (esp lpmuds with a laissez faire management). So while brainstorming into ways to make this other than the typical casino joint, we hit upon the a new twist, and made Horvendile the victim

So we set up our casino which was hidden behind a secret door in a fireplace. The actual lpc files were carefully hidden away, giving them innocuous names in other wizards directories. These files would then be copied somewhere else, the room loaded, and then the copies deleted. This way, source code couldn't be examined to find out what was going on. (I was planning on changing mudlib code so a dummy file would show up if you listed the file, but decided against it)

So finally, things were finished, and we loaded it up. I sat around snooping Horvendile, relaying the events to the other cohorts. Odd sounds were heard behind the fireplace, and some players were going in and out from there. So Horvendile pokes around, finds the entrance and goes in. What he sees is the Ladies Auxiliary Bingo Game, with numbers being called out at random. He takes a peek at the file, and discovers it isn't on the system. Oh well, no biggie, just destruct the room, probably Darin forgot to do this after a test.

Next day, he notices the silly bingo game is back. And again no source file. He finds the invisible object near the fireplace that causes all the noise, but its file doesn't seem to be around either. And why have those two players been sticking around a bingo game for the last 15 minutes? Well, maybe things have changed, but no, after popping in, it's the same old bingo game. Well Horvendile is pretty sure Darin has really flipped this time. All this concern about quality areas and keeping things in theme, and here he's working on a bingo game!

So, anyway a few days later, he pops into my workroom laughing and falling out of his chair (literally, he tells me). Congratulations all around, good job, keep up the good work, that sort of thing. He's very glad to know that I wasn't really going loony after all. Of course, he threatens, next time this happens I'm history... So what happened you ask? What's the scoop? Here's a short transcript from a players point of view:

[at a side room of the pub]

```
> look at fireplace
This is a large L-shaped stone fireplace with a fire
blazing in it.  The hearth and the mantle look as if
they have been recently cleaned.  There is a couch here,
a painting above the mantle, and a sign on the wall. You
seem to catch sight of something behind the fire.

> enter fireplace
You slip though a secret passageway behind the fireplace
and enter a hidden room...

The cigar smoke fills the air in here, making it a bit
hard to see very far, but you can tell there is a lot of
activity going on.  The patrons here are sitting at
tables scattered about, engaged in games of chance...,
er skill.  Prominently displayed upon the far wall is a
large sign, and along the west wall are some odd looking
machines.  A slightly out of tune piano is being played
near the east wall.
   The only obvious exit is south.
Harnlen, the host of this establishment.

Musician sings: Help!  I need some wizard.
Musician sings: Help!  Not just any wizard!
Harnlen says: Anyone can win!  Why even Harry turned in
a profit!

> look at sign
The sign proudly exclaims:
  The Back Room
    Welcome one and all.  If you're happy, we're happy.
  House rules:
   -No credit.
   -Take your empties with you.
   -Don't kill the hired help.
   -Don't tell Horvendile where we are.
   -Have fun.
```

[a bit later...]

```
Harnlen shouts: RAID!
Instantly, the staff springs into action...
The west wall rotates around quickly, hiding the slot
machines and on the back side are some paintings of
pretty flowers. Large fans descend from the ceiling,
quickly blowing away all the cigar smoke in the air.
The staff remove their vests, turn them inside out, and
```

```
put them back on.  All of the cards, dice, and bets on
the table are scooped up and hidden away.

Finally, a small group of old ladies emerge from a
hidden door and take some seats (and just in time).

Horvendile arrives.

The room appears entirely different now, a complete
change of scenery.  Someone next to you whispers "Shh,
don't let on to Horvendile.  He'd surely disapprove."

> look
This is the local chapter of the Ladies Auxiliary.
Right now they are holding their annual charity drive,
and many of the more well-to-do are here in support.
This year there is a bingo game going, and although the
ladies strongly disapprove of gambling (gasp) it is all
for a good cause.
   The only obvious exit is south.
Horvendile .
An announcer.

Announcer calls out: I-11
Announcer calls out: B-9

Horvendile says: This is silly.
Horvendile leaves south.

Harnlen says: *whew* That was close.  Now that the big H
is gone, let's get back to some serious adventuring!

The west wall swings around, revealing some ancient slot
machines, and the old ladies file out the back.  The
dealers sit back down at their tables and they each
light up a cigar, ready for the fun to start again.

A patron sobs: Please, just a little more credit.  I can
win it back.
```

Of course, we kept things as they are, giving files a permanent location. When the mood strikes him, Horvendile pops in now and then to suprise the unsuspecting patrons.

--
Darin Johnson
djohnson@ucsd.edu
—Luxury! In MY day, we had to make do with 5 bytes of swap...

Appendix Two: The Double Bluff

From: anonymous
Date: Fri, 06 Nov 92 11:32:16 GMT
To: emr@ee.mu.oz.au
Subject: MUD romances.

Hi... you asked for stories about romances on MUDs, well I've got a terrific one! I met my husband on a MUD, but when we met he first became my girlfriend!

It started when I joined up on PernMUSH. I thought it would be fun to try playing a male character, just to see what would happen. In case you're interested, which I guess you probably are, there were some differences between being male and female on the MUSH. For one thing, I got to be in on all these conversations about women... most of them were just kind of, like, just guys talking about how they could get dates and stuff, but sometimes it was pretty graphic, which I thought was offensive sometimes. But then again I guess I tell my best girlfriend some pretty intimate details. I don't know, it just seemed weird sometimes. And of course no one tried to come onto me, which is pretty common if you're a female on a mud! Anyway, so I was playing this male character, and one day I started talking to this female on the mush. We got along *really* well, *really* *really* well. We just had all these things in common, just dumb little things, favorite foods and tv shows and music and stuff. We started spending a lot of time together on the mush, chatting and stuff. After a while our characters kind of got involved. I should say that most of this was role-playing, we didn't swap real names or anything—we did have a few OOC conversations, but mostly we were getting along as our characters. Anyway, (I don't know if you've read the Pern books by Anne McCaffrey, but they are all about people having these telepathic relationships with dragons) this woman was a green dragon rider, and I was a brown rider, and one day her dragon flew to mate and my dragon flew hers. After that our characters were weyrmates—a couple, if you haven't read the Pern books. At first I was pretty happy with that. It was really interesting, but as we got to know each other better, and since our characters were a couple, and we did all the netsex thing, I really began to feel strongly about the player. I was pretty confused by it all, cause I'd never been anything but straight, but I eventually I decided I was going to tell my friend that I loved her IN REAL LIFE!!

So I log into the mush, and I basically say to my weyrmate that I've been thinking about her a lot RL and I'd really like it if we could get to know each other RL more because I thought I was falling in love with her. At this point, before I can go any further, AND BEFORE I CAN BRING UP THE SUBJECT OF MY REAL GENDER, she logs out! No warning, she just disconnects. Well, I was devestated. At first I thought that maybe it was just a technical problem, but she didn't log back on for nearly a week (usually we'd log on together every day) and when she finally did she almost totally ignored me. I kept on trying to talk to her, and I was pretty distraught by this stage. Eventually, this would be about two weeks after our conversation, she says that she needs to tell me something. She just says that she's really sorry, she hadn't imagined that things would end up this way, and she really did like me as a friend, but that she was really a MALE in real life. Well!! I just sat there stunned for a minute. Then I told her—HIM—that *I* was really *female*. At first he didn't believe me, but after a while I convinced him to telephone me in real life, so I could prove what I was saying. He did and we had this really weird, tense conversation... I guess we were both pretty confused. It took us a while to become friends again, but after a while we did. We both started new characters on the MUSH, with the *right* gender this time, and after a few weeks we were close again. Closer, in fact, because there was now a real life element. We had a lot more phone calls, and eventually we decided that we should meet... and it was a complete success! We got along as well in real life as we had on the MUSH, and we ended up going out together. Luckily we lived in neighbouring states, so we were able to visit each other a lot, and in the end I transfered to college in his town so we could be together.

This was about 18 months ago. We got married in May this year.

Appendix Three: The First Case of Cross-Gendered MUD Playing

From: Richard Bartle <richard@spuddy.uucp>
Subject: Re: MUD romances?
To: emr@mullian.ee.mu.OZ.AU
Date: Thu, 11 Mar 93 19:48:42 GMT

You wanted an anecdote...

This story concerns two people, Mik and Sue [...]

Mik was an archetypal hacker. He lived and breathed computers, wrote a best-selling computer game when aged about 16, and eventually set up his own computer company. He was also extremely competent at MUD1, and eventually was promoted to the rank of arch-wiz. In MUD1 there were three levels of control: mortals; wizzes; arch-wizzes. We had literally hundreds of mortals, dozens of wizzes, and a handful of arch-wizzes (the rank was invitation only). These days, you'd maybe call him a god, although in those days you wouldn't, especially as his family was a very strict orthodox Jewish sect with rather set ideas on words like "god"..!

Sue was an archetypal MUD addict. Although the game was only available between midnight and 6am, Sue would play the entire time, every night. She had telephone bills of over a thousand pounds a month, as she had to call long-distance to play. She was, however, a dazzlingly brilliant player, and when she was eventually promoted to arch-wiz she brought an atmosphere of respected authority to the rank which was the defining example for generations of later arch-wizzes. She wrote an article on MUD for "Personal Computer World", then and now the premier UK computer magazine, and we had hundreds of people write as a result; it was what really got the MUD1 ball rolling.

In real life, though, Sue was painfully shy. Whenever we phoned her, she was lost for words, she hated using the phone for conversation, and would tell us she'd join us in MUD1. There, she was freed from the shackles of her real life self, and could talk freely and authoratively. MUD1 was great therapy!

Being one of the few females in the game, one would have expected her to get chatted up by every male around. This wasn't the case, however. Firstly, as an arch-wiz, she had more status than most males. She also knew more about MUD1 than anyone except perhaps me. Also, most of the males around weren't the kind that chat people up anyway—in those days, only really dedicated computer enthusiasts had modems, and that meant they were, in the main, what might be called "computer nerds". Mik even looked the part—his enormous glasses made his eyes seem the size of tennis balls, and his teenage complexion was what you'd expect of someone who rarely saw daylight and ate nothing but bars of chocolate.

Sue WAS chatted up once, but it was but a female persona, Paula. Sue was suitably horrified, and as a result Paula admitted that actually she was actually run by a soon-to-be-married couple, and the male half had been playing her that night.

Sue's shyness was a problem. Whereas we'd all get together for MUDmeets at the computer shows, Sue (although present at the show) would never make herself known to us. She sent us photographs, but in them her appearance varied dramatically—hair length and colour would change, she'd wear different organisations of make-up, and so on. Only in MUD1 did she feel confident in herself.

Mik took to writing letters to her, as she didn't mind replying by post. It turned out she had a pretty awful life story—parents divorced when she was young, she'd had to live with her grandparents, she'd attempted suicide a couple of times. She was sharing a flat (er, that's an appartment to you) with a girl friend of hers, and was having difficulties because her flatmate was a lesbian and Sue was worried about her own sexuality. Oh, and she'd occasionally get very, very drunk—heaven help you if you were on MUD when it happened!

Sue's letters back to Mik got longer and longer—he showed me an average one once that was 109 pages in length! All handwritten in this really flowery handwriting. The most she ever wrote to me was 15 pages. It was clear that she was getting more and more fond of Mik. In return, Mik was getting infatuated with her. He was around 17, and because of his strict upbringing this was the first experience with a woman he'd ever had.

Well, things got more and more involved, and eventually Mik and Sue announced that they were in love. Mik proposed marriage, despite never having met Sue in the flesh. Sue said she'd have to think about it, and arrange a meeting.

Then, all of a sudden, Sue announced that she'd got a job as an au paire in Norway and would be leaving immediately. That was it: she disappeared from MUD and wasn't seen again.

Mik was aghast at this, as we all were—everyone liked Sue, and her disappearance seemed so uncharacteristic, it was like she must have been in trouble. She hadn't even replied to Mik's offer of marriage (or at least I think she hadn't—there was a rumour that she'd turned him down but I can't verify that). After many agonised phone calls to places she'd mentioned in her letters, none to any avail, Mik decided he had to go to her house to find the answer. So he and a whole bunch of fellow MUDders piled into a minibus and drove to South Wales to Sue's house.

They knocked at the door. A woman answered.
"Sue?" It looked sort of like her.
"I think you'd better come inside...".

Sue was a man who had just been jailed for defrauding the Department of Transport of 60,000 pounds. This was his wife. Over there were his two small children.

I need hardly say what a devastating affect this had on Mik. I know I was shocked, because it had occurred to me several times that Sue might have been male, but every "test" I set was passed with flying colours. We'd even get little unsolicited details, like when she didn't reply to a message immediately because she'd just snagged a nail. I remember once I printed some MUD sweatshirts which had the opening description printed on them, "You are standing on a narrow road between the Land and whence you came. To the north and south are the foothills of a pair of majestic mountains, ... "; Sue told me she liked hers (size small), but people kept looking at her funny as the words "pair of majestic mountains" were emblazoned right across her, well, her majestic mountains! It was little details like this which made her so convincing. When we found out she never existed, and that everything had been a fraud from start to finish, it was really awful.

Mik recovered in time, and still runs his company to great success. Sue (who was really Steve) was released from prison after a while and actually phoned me as himself a couple of times, but obviously couldn't ever set foot back in MUD again. He told me he hadn't been deceitful deliberately, it's just that when the game asked him what sex he wanted to be, he wondered what would happen if he said he was female. It all just grew from there. I didn't ask him how he felt about what he did to Mik, because he was clearly very embarrassed about it all, as was I!

The only thing I don't understand in all this is how his wife could tolerate it all.

Well, that's the story of the first MUD gender transfer debacle. If you want to use it, I'd appreciate it if you didn't identify Mik by his real or MUD name—I wouldn't want to cause him further agonies by resurrecting the issue in public.[99] As far as I'm concerned, whether you mention Sue by name or not is up to you—I've no qualms about it!

I hope this has been of help, anyway!

Richard

[99] In accordance with Mr. Bartle's request I have changed the name of the gentleman in this case to 'Mik'. I have also deleted a paragraph from this item of mail which contained identifying information about 'Mik'. Sue is, however, the name by which Mr. Bartle referred to this character. Since 'her' name has been mentioned in Rheingold 1993 (p. 164) I felt there would be little point in giving her (yet another) pseudonym.

Appendix Four: The Evolution of Communication

...Amongst Players:

To: Elizabeth Reid <emr@mullian.ee.mu.OZ.AU>
Subject: Re: A History of MUDs.
Date: Thu, 16 Dec 93 10:02:45 -0600
From: Jennifer Smith <jds@hardy.math.okstate.edu>

[Jim Aspnes didn't invent the pose command], but he did program it (and I believe was the first one to do so—I'm pretty sure AberMUD didn't have one at the time). The invention of it took place roughly like this:

On TinyMUD, there is a 'rob <player>' command, that allowed you to attempt to steal 1 penny from said player. However, said player could prevent this by @locking themselves, and then they could set a @fail and an @ofail message on themself. The @fail message is displayed to the person doing the robbing, the @ofail is displayed to everyone else in the room with the robber's name prefixed.

Example:

    @fail me=Moira slaps your hands.
    @ofail me=gets his hands slapped by Moira.

    Bozo types> rob moira
    Bozo sees> Moira slaps your hands.
    Everyone else sees> Bozo gets his hands slapped by Moira.

As it happens, if you're not @locked, the @success and @osuccess messages get displayed in the same manner if you are robbed. In not a whole lot of time at all, people started MANUALLY setting their @osuccess to a 'posed' command and robbing themselves—they usually were @locked to themselves, which is a TRUE lock, so only they could set off that message. Example:

     @osucc me=falls over laughing.
    rob me
    I see> Moira stole a penny from you!
         You stole a penny from Moira!
    Everyone sees> Moira falls over laughing.

Ta-da, a pose!

This is, as you can imagine, a horribly blunt way of doing poses, as each time you have to reset your @osucc. After about a week of this, Wizard (Jim Aspnes) gave up and added the pose (aka ':') command.

I should point out that the 'rob' command (as well as the 'kill' command) were never really used in a combat sense—they weren't THAT useful. 'rob' died completely fairly soon, and 'kill' became a sort of exclamation point to discussions. Many Tiny*

servers today either don't have the 'kill' command at all or have ways to turn it off completely.
[...]
'whisper' wasn't added until TinyHELL, the second TinyMUD server. Even then it was added only after quite a bit of debate, and the first version (for about three days) was 'noisy'—if you weren't the person being whispered to, you saw 'Bozo whispers to Moira.' messages all the time. You also forgot page—another oddly evolving command. Originally if you did 'page Moira', you sent a message to Moira of the form:

You sense that Moira is looking for you in Front Lawn.

Obviously, as the pose command became more popular, this command was also mutated. All you had to do was rename your room, and...

You sense that Moira is looking for you in Hi, How are you?

Someone realized that everyone was keeping small 'paging' rooms squirreled away, and there was no point in trying to keep people from having conversations when not in the same room, so the ability to add a message to the page command was added. 'page user[=message]'.A bit later, posing was added to both whispers and pages.
[...]
--
Jennifer Smith
jds@math.okstate.edu
On MUDs: Moira, Jasra, etc. | It's the terror of knowing
Here, have a clue. Take two, they're small. | What this world is about

...and Wizards:

To: Elizabeth Reid <emr@mullian.ee.mu.OZ.AU>
Subject: Re: A History of MUDs.
Date: Fri, 17 Dec 1993 10:40:53 +0000
From: Jim Finnis <clef@aber.ac.uk>

I'm glad to have my 15 minutes of fame at last! :-)
[...]
Right, the emote command.

First came the 'atmosphere' commands. Talking to people and shouting at people and hitting people with pointy things was all very well, but you couldn't interact in other ways; so we wrote commands like "cry", "smile", "laugh" so users could express emotion. They were pretty easy to write, literally an entry in the verb table and one like of code, something like

```
case CRY:          you("cry");break;
```

The "you" function (or whatever the hell it was really called) was already there for doing stuff like

```
you("opens the door");
```

which (if I were logged in under my customary handle) would print "White opens the door".

A little later, the AberMUD 'pose' command got added, for Wizards only. This would use a list of 7 or so emote strings stored in the program, such as "White calls down a bolt of lightning from the sky", and show a random one. There was one 'booby-prize' in there, something along the lines of "White turns casually into a wombat before resuming normal form". The point of this was, of course, to impress mortals :-)

Because they were so easy to write, these atmosphere commands just kept being added to the system until we had something like 30 of them. I felt this was beginning to get out of hand—we needed something that would allow us to express *any* emotion. In addition, we Archwizards always liked to be able to do things no-one else could, so an obvious extension was to write a command like this:

```
case EMOTE:     you(first_argument);break;
```

so the user could decide what he/she was emoting. It was an obvious extension really, although I was absurdly proud of it at the time...

It was only after about 6 months that we let normal mortals use the 'emote' command. Before that, we needed to make sure that the users couldn't send commands that looked like AberMUD system messages—e.g. we had to change the message "quit" gave to everyone else in the room.

In the interest of oneupmanship, the Wizards then got a new command, "raw", which behaved like "emote" but didn't prefix the user's name to the output string.

That's all there is to it really—it was just obvious at the time, from looking at the code. If the code hadn't been written like that, I doubt I would have thought of it.

Hope this helps,
Regards,
Jim

Jim Finnis, | Unit 6A, Science Park, Aberystwyth, Dyfed
Clef Digital Systems | SY23 3AH Wales.
clef@aber.ac.uk | Tel.: 0970 626601 Overseas: +44 970 626601
| Fax.: 0970 626458 +44 970 626458
"When the going gets weird, the weird turn pro..."

Appendix Five: The Expression of Feelings on 'Nemesis'

From: gerstnet@Informatik.TU-Muenchen.DE
Newsgroups: rec.games.mud.misc
Subject: Verbs and adverbs top list
Date: Sat, 6 Nov 1993 13:42:55 GMT

This is the result of a verb and adverb count in Nemesis LPMud. The figures give the number of uses for each verb and adverb for the last year. The exact meaning of all verbs (if not straightforward) can be tested in Nemesis (address and number is prominent in every good mudlist).

It is a bit difficult to find out about the exact time period for the list, but 250 days with an average of 20 players should be a close approximation, which results in a feeling every 30 seconds, which also sounds like a reason-able figure for me.

Players and wizards were not informed about this list, so it is improbable that the figures have been cheated. The list was originally made to throw out unused verbs and adverbs, but I was quite surprised that only a few of them were almost never used.

Most verbs in Nemesis have no default adverb, so 'smile' will result in '<name> smiles.' and 'smile happ' will result in '<name> smiles happily.' Adverbs could be abbreviated to (at least 3) unique characters and they were only counted if they were explicitly given.

There are four cathegories for verbs: without object (like bounce), with another player as object (like kick) with special objects (like poke) and with any object (like curse). Most verbs fall in more than one of these cathegories.

We at Nemesis did some analysation already, but I think that it might be more interesting for some (wannabe) sociologists and psychologists.

This list if free for distribution as long the name of the author is mentioned.

Verbs:

smile	89089	bow	50138	shake	46312	greet	46152	grin	46046
nod	42385	laugh	34063	wave	30875	giggle	20145	sigh	19222
hug	19220	wait	13550	kiss	12212	shrug	10849	kick	9504
poke	9307	chuckle	7401	french	6773	smirk	5994	wonder	5701
dance	5625	bounce	5150	comfort	4916	pat	4356	cry	4244
fart	4158	blush	3981	cheer	3631	punch	3592	scream	3250
ponder	3193	lick	2964	puke	2915	thank	2914	think	2765
raise	2704	tickle	2662	curse	2590	cackle	2498	sniff	2476
knee	2474	slap	2412	gasp	2404	hold	2268	burp	2250
point	2220	view	2206	jump	2141	wink	2130	sing	2016
meow	2008	whistle	1852	rub	1817	twiddle	1803	agree	1766
love	1745	curtsey	1686	pout	1682	snicker	1634	frown	1612

stare	1579	cuddle	1566	growl	1480	fondle	1480	puzzle	1447
ruffle	1403	strangle	1363	flip	1343	bang	1341	yawn	1318
listen	1303	worship	1286	mosh	1286	spit	1232	scratch	1228
sob	1124	pose	1089	clap	1055	sulk	1045	pinch	1038
applaud	1032	bite	966	beg	841	stroke	826	five	804
tap	785	kneel	774	stomp	746	wiggle	716	roll	715
snuggle	712	snore	702	shriek	671	moonwalk	664	faint	649
groan	623	shiver	610	peer	609	moan	589	strut	587
nibble	555	grope	517	congrat	512	smack	479	grumble	470
snap	461	squeeze	438	wander	434	sneeze	421	hiccup	415
purr	404	cough	403	hum	378	mumble	373	lean	364
glare	356	meditate	354	wish	352	howl	349	apologize	318
twinkle	281	pant	254	breath	252	ovat	249	drool	235
stretch	229	swear	214	strike	208	caress	193	shame	186
daydream	169	dream	165	headbang	128	disagree	107	gape	93
sweat	91	fear	75	snarl	48	embrace	46	quiver	36
kisshand	35	mourn	27	excuse	16	count	9	despair	3

Adverbs:

happily	5057	demonically	3763	evilly	3662	sadly	2027
smilingly	1864	deeply	1458	passionately	1143	knowingly	1119
insanely	1096	erotically	950	inanely	926	warmly	905
loudly	891	friendly	834	mischievously	827	lovingly	797
handsomely	778	understandingly	774	innocently	746	merrily	729
agreeingly	715	tightly	704	sexily	668	wildly	642
solemnly	593	hysterically	560	stupidly	552	satanically	542
impatiently	504	heartbrokenly	496	manfully	468	wholeheartedly	461
amusedly	449	madly	431	shyly	416	vigorously	401
sadistically	400	devilishly	400	viciously	374	deadly	369
melancholically	366	enthusiastically	361	confusedly	354	playfully	351
softly	343	proudly	321	sarcastically	310	theoretically	309
gently	303	tenderly	299	mysteriously	295	gracefully	294
patiently	286	fiendishly	286	painfully	285	slowly	279
boredly	257	professionally	253	fatherly	252	helplessly	251
maniacally	250	childishly	247	wisely	241	seductively	230
randomly	227	joyfully	226	triumphantly	223	tiredly	222
thankfully	220	politely	217	suggestively	215	aimlessly	207
questioningly	202	dirtily	199	absentmindedly	198	sweetly	195
funnily	189	heavily	188	curiously	187	thoughtfully	182
lustfully	176	confidently	173	hopefully	169	crazily	159
strangely	149	dreamily	149	carefully	146	angrily	139
charmingly	137	depressively	135	quickly	134	musically	131
helpfully	129	sheepishly	124	dangerously	124	disgustedly	122
ironically	113	silently	112	foolishly	111	humbly	110
bitterly	108	hungrily	106	contentedly	105	royally	104
unknowingly	103	desperately	102	sensually	92	nervously	91
interestedly	91	intently	91	rudely	89	anxiously	86
embarrassedly	85	wearily	82	slightly	82	harmonically	82
quizzically	81	goofily	81	noisily	80	egocentrically	80

cynically	80	perfectly	76	aggressively	72	jealously	71
seriously	69	hotly	68	emphatically	66	wistfully	65
tearfully	65	greedily	62	nastily	59	disappointedly	57
cutely	55	brightly	54	amazedly	49	briefly	48
quietly	47	physically	47	sniffingly	46	unbearably	44
cunningly	44	suddenly	43	sleepily	43	lazily	43
unhappily	42	bravely	41	sufferingly	39	terribly	38
shamelessly	38	profoundly	37	virtually	35	unexpectedly	34
fiercefully	34	doubtfully	29	badly	29	fanatically	26
endearingly	26	astonishedly	26	tragically	24	ignorantly	24
jokingly	23	personally	22	exhaustedly	22	spontaneously	21
trustfully	20	sickly	20	really	20	searchingly	19
honestly	19	patronizingly	18	surprisingly	15	courageously	12
busily	12	truly	11	instantly	11	philosophically	9
skilfully	8	definitely	8	rebelliously	7	scornfully	3
carelessly	3	sceptically	2	egoistically	1		

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/~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~/~\
| Thomas Gerstner   gerstnet@informatik.tu-muenchen.de   Junky@Nemesis   |X |
\______________________________________________________________________________\_/
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Appendix Six: The LambdaMOO Player Survey

From: Pavel Curtis <Pavel@parc.xerox.com>
To: emr@mullian.ee.mu.OZ.AU
Subject: Comments on Chapter Two
Date: Thu, 23 Dec 1993 16:26:26 PST

In a recent survey of 583 MOOers, we got the following estimates of how much time they spend doing different things:

social: 57.26%
building: 14.14%
gaming: 6.99%
exploring: 14.63%
other: 6.98%

From: Pavel Curtis <Pavel@parc.xerox.com>
To: emr@mullian.ee.mu.OZ.AU
Subject: Comments on Chapter Three
Date: Tue, 28 Dec 1993 17:01:23 PST

Page 4:
Para 3: To inform the 'common lore' here, 76.6% of our LambdaMOO survey respondents claimed to be male and 23.4% female, in real life.

[...]

Page 5:
Para 4: Here are the numbers from the RL age question on our survey:

There were 581 answers to this question:

What is your "real life" age, in years?

2	(0.3%):	1
2	(0.3%):	12
6	(1.0%):	13
10	(1.7%):	14
4	(0.7%):	15
6	(1.0%):	16
12	(2.1%):	17
34	(5.9%):	18
90	(15.5%):	19
62	(10.7%):	20
53	(9.1%):	21
42	(7.2%):	22
42	(7.2%):	23
32	(5.5%):	24
21	(3.6%):	25

31	(5.3%):	26
17	(2.9%):	27
19	(3.3%):	28
10	(1.7%):	29
7	(1.2%):	30
7	(1.2%):	31
11	(1.9%):	32
10	(1.7%):	33
6	(1.0%):	34
6	(1.0%):	35
3	(0.5%):	36
5	(0.9%):	37
5	(0.9%):	38
5	(0.9%):	39
3	(0.5%):	40
4	(0.7%):	41
1	(0.2%):	42
4	(0.7%):	43
1	(0.2%):	44
3	(0.5%):	45
2	(0.3%):	49
1	(0.2%):	51
1	(0.2%):	54
1	(0.2%):	120

Average: 23.66

Clearly, the two answers of ‘1’ and the one ‘120’ answer are bogus. Throwing them out, the average is 23.58 years old. Note that every age from 12 through 54 is represented in the results.

Appendix Seven: Character Generation...

...Complex:

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      ___________    ___________    ____________   ___
     /  _________/\ /  ______   /\ /____   _____/\ /  /\
    /  /\________\/ /  /\____/  / / \___/  /\____\/ /  / /
   /  /_/______    /  /  /   /  / /     /  / /      /  / /
  /  _________/\  /  /  /   /  / /     /  / /      /  / /
 /  /\________\/ /  /  /   /  / /     /  / /      /  / /
/  /_/______    /  /_/___/  / /     /  / /      /  /_/_______
\___________\/  \___________\/      \__\/       \___________\/

          *** THE REVENGE OF THE END OF THE LINE ***

Use 'Guest' to look around or if you are having problems
with your character.
***Players who don't login every 120 days will be purged.***

Enter your name: Ireshi
New character.
Choose a password: ******
Password (again): ******
Welcome To: Revenge of the End of the Line (LPmud)
You can remember nothing but an ageless eternity of waiting
in a warm confining darkness.  Now, you float before a
mighty mirror which but dimly glows, its light engulfed by
the void beyond.  A shapeless mist is all that is visible of
yourself in the mirrored surface.  The time has come to join
the living!
A voice speaks from the darkness:
"You must choose the form that you shall inhabit for the
remainder of your days.  You may appear as one of many types
of mortal beings."
Centaur     Drow Elf    Dwarf       Elf        Gnome
Grey Elf    Half Elf    Halfling    High Elf   High Human
Human       Imp         Ka'nine     Kender     Klingon
Low Human   Orc         Parthan     Squid      Teddy Bear
Trenol      Troll       Wood Elf
Choose a race, get 'info <race>' on a race, or 'list' races.
Your Choice: info teddy bear
Teddy Bears are small, lovable creatures.  Their paws are
too clumsy to wield most weapons, and their awkward body
shape prohibits most armor from being worn, also.  They are,
however, small and agile, reasonably intelligent, and cute
as a race can be.
Choose a race, get 'info <race>' on a race, or 'list' races.
Your Choice: teddy bear
The voice speaks once again:
"Your form decided, you must now choose the characteristics
that will define your abilities.  Choose wisely, lest your
life be brief and unrewarding.  Your race begins with the
following characteristics.  You may add 5 points to
yourself."
Enter the name of a stat to increase it by 1, or '<stat>
<v>' to raise a stat by v points.
Str: 5, Int: 11, Wil: 9, Con: 5, Dex: 15, Chr: 25, Free:5
Your Choice: int 4
Str: 5, Int: 15, Wil: 9, Con: 5, Dex: 15, Chr: 25, Free:4
Your Choice: dex
The voice speaks once again:
"Finally, you must choose the gender your body will conform
to in its mortal lifetime.  Confused souls may choose to be
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passed on as sexless beings, although it is known that
androgynous individuals lead lonely lives.”
Genders available: male, female, other, unknown.
Your Choice: female
The voice speaks a final time:
“You are ready to enter the world of the living.  Enter the
mirror if you are prepared or change into another form if
you are unsatisfied with your current one.  We will not meet
again.”
New Character Generation Chamber
   You stand before a mighty mirror whose dim glow is the
sole illumination in this chamber.  Runes engraved upon the
surface of the mirror instruct you to <change> to move your
soul into a new form or <enter> the mirror
to begin your days as a mortal.
---- Obvious exits are: enter, change.
```

...Or Simple:

```
Welcome to AcmeMUSH!
Type connect <name> <password> to connect to an existing
character.
Type create <name> <password> to get a new character
> create Ireshi ******
Welcome to AcmeMUSH, Ireshi! Before you venture on into the
world, you might like to set your gender (@set
me=male|female|neuter) and your description (@desc
me=<text>).   Have fun!
```