Verbal-Visual-Virtual: A MUDdy History

Alison McMahan

In his book, *The Rise of the Network Society*, Manuel Castells approaches the idea of a networked society from an economic perspective. He claims that "Capitalism itself has undergone a process of profound restructuring", a process that is still underway. "As a consequence of this general overhauling of the capitalist system...we have witnessed... the incorporation of valuable segments of economies throughout the world into an interdependent system working as a unit in real time... a new communication system, increasingly speaking a universal, digital language" (Castells 1).

Castells points out that this new communications system and the concomitant social structure has its effects on how identity is defined. The more networked we are, the more priority we attach to our sense of individual identity; "societies are increasingly structured around a bipolar opposition between the Net and the Self" (3).

He defines networks as follows:

A network is a set of interconnected nodes. A node is the point at which a curve intersects itself. What a node is, concretely speaking, depends on the kind of concrete networks of which we speak.

Networks are open structures, able to expand without limits, integrating new nodes as long as they are able to communicate within the network.... A network-based social structure is a highly dynamic, open system, susceptible to innovating without threatening its balance. [The goal of the network society is] the supersession of space and the annihilation of time. (469-470)

Castells' claim that we now live in an information society is based on the change he perceives in the balance between nature and culture. For millennia nature dominated culture. With the Industrial Revolution Culture came to dominate Nature (which didn't free us from the oppressions of Nature). Now we are entering a new era, in which culture refers to culture.

Another way to explain this progression is to use the terms for social stages: wilderness, village, city, and oppressive city. Wilderness is what Castells refers to

as Nature over Culture; Village represents the transition from Nature over Culture to Culture over Nature; and City, its accomplishment. Oppressive City is the dystopic view of Culture over Nature. But now we've moved to something new, not the power of cities over Nature, but a new era of networked cities, a new era of networks. With his contention that we have reached a new age of Culture over Culture, Castells has indicated that we are in a new social stage, a stage that hasn't yet been named, but perhaps we could call it the era of Global Networks.

Here is how Castells characterised this new social stage:

It is the beginning of a new existence, and indeed the beginning of a new age, the information age, marked by the autonomy of culture vis-a-vis the material bases of our existence. But this is not necessarily an exhilarating moment. Because, alone at last in our human world, we shall have to look at ourselves in the mirror of historical reality. And we may not like the vision. (477)

It is my contention that MUDs¹ are just one of those "mirrors of reality" in which we can see our human reflection. Here is what one of them looked like:

It was called PointMOOt, and it was designed by "a hodgepodge of undergrads, doctoral students, and intrigued volunteers" at the Advanced Communications Technologies Laboratory at the University of Texas at Austin (ACTlab) under the supervision of Professor Allucquière Rosanne Stone in the spring of 1993. These "wizards" dreamed of simulating a fully functional society, lodged within the digital recesses of a computer, true in all essential categories to the principles of the real world. They called this dream "reality modelling":

...PointMOOt began as a top-down exercise in social engineering. Citizenry would be anyone who could log on. Located at a fictional west Texas cross roads, Point MOOt boasted a university, several strip malls, and a TV station. Cafes, bars, and restaurants lined the streets. Trailer parks and tenement buildings, hospitals and churches, PointMOOt had everything a healthy city requires.

To live in PointMOOt you needed money, called quota, or more popularly, MOOlah. To get MOOlah, you went to one of the bureaucrat bots and signed up for a job. Most of the jobs consisted of building onto the city using MOO code, which was simplified programming language, but many casual citizens found that too intimidating. However, this was west Texas, so they also didn't want to sign up for welfare with the welfare bot. So the wizards, in an effort to avoid the creation of wealthy moo programmers and disenfranchised other citizens, created a Barney spewing machine in the hidden tunnels under PointMOOt. The machine would spew

out men dressed in purple dinosaur suits that would go through town singing the Barney song, picking locks and generally annoying people. If you kicked one it broke into 5 pieces and each piece regenerated into another Barney. But if you got a Barney blaster from the bounty hunter bot then you could shoot it dead and get one unit of MOOlah in exchange for the severed Barney head. Unemployment problems solved.

Somehow or other, people discovered a few things about the Barneys. In addition to their normal reproduction, (being spewed out of the machine), it was discovered that Barneys could be impregnated, and it would give birth to another Barney that had your name included in its code. Also, if you started feeding a Barney, it went on a feeding frenzy until it blew up, and all the pieces became Barneys, which then went on feeding frenzies. As a result of such antics PointMOOt would occasionally be overrun by a plague of Barneys, until eventually PointMOOt had to be shut down. (Leonard 1-10)

Andrew Leonard tells us this story as a basis for his warnings about bots in general. A bot is a supposedly intelligent software program that is autonomous (they can work without direct human supervision) and is endowed with personality (it is anthropomorphized, which is not to be confused with artificial intelligence) and usually, but not always, performs a service. Leonard expects bots to eventually run amok, like the Golem that was supposed to protect the Jews of Prague, seen by some as a progenitor of bots.

I don't share Leonard's dystopic thinking. I repeat his story to introduce you to the basic concept of MUDs (and MOOs, like PointMOOt). MUDs are communities online, they contain bots as well as avatars (the constructed digital personalities that mask other players), and they are laid out along spatial principles, making the "map" of the world (and it is rare that a MUD will provide you with an accurate map) a crucial part of its structure. This is what all MUDs have in common; apart from this they can be very different. I have been using the terms MUDs, which is the basic, classificatory term, but there are many types of MUDs, types that have names like MOOs, MUCKs, MUSHes, and so on. The three main types are: basic MUDs, in which player "killing" is allowed, MUSHes, in which player killing is not allowed, and MOOs, in which players can create rooms and build props that can be used by everyone. These three classifications represent different kinds of software programming used to build the MUD.

Most MUDs are text based, meaning they read like a hypertext novel, but MUDs are gradually becoming graphic (the best known graphic MUDs are Ultima Online and Realms) and there are virtual reality MUDs that are explored in CAVEs (rooms with 3D digital projection on four or six walls from which the visitor can explore cyberspace). However in this paper I focus on text based MUDs, still the best known and most easily accessible (one usually has to pay a

monthly membership fee to play in a graphic MUD). There are already more MUDs out there than can be counted, and each one claims the loyalty of hundreds of players. And MUDs demand quite a bit of loyalty: it takes a minimum of about eight hours to get used to the basic gameplay, and then hundreds of hours more to completely explore a single MUD universe and, if you're lucky, achieve the rank of wizard, or immortal, that is, a level of game play where you can add to the spaces of the MUDs and create new quests and new monsters.

History of MUDs

Where did all of these MUDs come from? Conceptually speaking, from the fantasy worlds of J.R.R. Tolkien, and, to a lesser extent, of C.S. Lewis. Let's start with Tolkien.

John Ronald Reuel Tolkien was born in 1892, the son of an English merchant working in South Africa. His father died when he was still an infant and his mother returned with her sons to England. After serving in WWI-an experience which would colour his later writings—he taught for a while at Leeds and then went back to Oxford where he was Rawlinson and Bosworth professor of Anglo-Saxon for twenty years and was then elected Merton professor of English Language and Literature. He lived in a conventional Oxford suburb and died a peaceful death at the age of 81. It was the ordinary unremarkable life led by countless other scholars, a life of academic brilliance, certainly, but only in a very narrow professional field that is really of little interest to laymen. What makes him different is that he wrote two books which have become world best-sellers, books that have captured the imagination and influenced the thinking of several million readers: The Hobbit and The Lord of the Rings (Carpenter 118).

Adventure MUDs, and by extension, combat and adventure computer games, owe a direct debt to Dungeons and Dragons Role-playing games, and Dungeons and Dragons-D&D for short-was directly inspired by Tolkien's mythologies, *The Hobbit*, *The Lord of the Rings*, and *The Silmarillion*.

Tolkien was a philologist who delighted in inventing languages even as a child; his language for the Elves in his mythological Middle Earth was derived partly from the Finnish of the medieval epic *The Kalevala*, which also inspired some of his story elements (Carpenter 57). About the *Kalevala* he said that "these mythological ballads, are full of that very primitive undergrowth that the literature of Europe has on the whole been steadily cutting and reducing for many centuries". And he added: "I would that we had more of it left-something of the same sort that-belonged to the English" (Carpenter 57). Tolkien was deeply grieved by the conquest of Britain in 1066 by the French; to him it was as if it had happened in his own lifetime. He grieved over the "truly English" literature that must have existed at that time but is now lost forever, with only the Beowulf sagas, Exodus, and the *Ancrene Wisse* (an instruction tract for medieval anchorites from the West Midlands) remaining; these works also influence *The Lord of the Rings* (Carpenter 165).²

Like his life-long friend, C.S. Lewis, who wrote *The Namia Chronicles*, Tolkien's writing was deeply influenced by this Catholicism (In fact, Lewis converted to Catholicism as a result of Tolkien's influence). Although the hobbits, elves, dwarves, orcs, wizards and humans that populate the Middle Earth do not worship God, the sense of heavenly hierarchy that characterises Catholicism also characterises his legend, the sense of life as quest and of the greatest goals being intangible ones.

It is precisely this archaic quality, this world-before-technology, this world-before-the-Fall, that makes it appealing as a source for role-playing games and also for MUDs and the other computer games that they have spawned. For Tolkien, the modern world meant the machine. The word machine was a word he tried to explore in *Lord of the Rings*, in the One Ring and the volcano at Mount Doom where it was forged and its power to give tyranny over masses of men. For Tolkien the machine was the wrong solution, the use of technology to actualise our desires like our desire to fly. He saw technology as a form of coercion over people and also a form of coercion over the Earth itself.³

Tolkien clearly saw in his world the second social stage as Manuel Castells describes, in which Nature is dominated by Culture, a culture associated with the Industrial Revolution and the Triumph of Reason. According to Castells, in this second stage "humankind found both its liberation from natural forces and its submission to its own abysses of oppression and exploitation" (477). Tolkien watched the world go from wilderness to village stage, from village to oppressive city, in his own lifetime and he felt that there was no turning back.

It might seem paradoxical that given Tolkien's hatred of machines –he especially despised the combustion engine – that his mythology has led to the spawning of hundreds, possibly thousands of virtual communities with maps and plots and avatars all directly inspired by his myths. Tolkien would probably not have approved of the Internet, but he surely would have approved of MUDding. He invested a lot of effort in explaining to his fellow academics why he considered his fiction work so important. "What really happens," he wrote,

is that the story-maker proves a successful "sub-creator". He makes a Secondary World, which your mind can enter. Inside it, what he relates is "true": it accords with the laws of that world. You therefore believe it, while you are, as it were, inside. The moment disbelief arises, the spell is broken; the magic, or rather art, has failed. You are then out in the Primary world again, looking at the little abortive Secondary world from outside. (Carpenter 194-5)

Although Tolkien described his world in prose and poetry, the visual element was very important to him, and the earliest editions of the books were published with his own illustrations, and even more importantly, his own maps. Maps are extremely important in the Tolkien universe, as they are in Dungeons and

Dragons and in MUDs.

Tolkien first published *The Hobbit* in 1937, and *The Lord of the Rings* was published (first two volumes) in 1954 and the third volume in 1955. In 1965 an unauthorised version of *The Lord of the Rings* was published in the United States and when Tolkien and his publishers took action, the resulting publicity helped the book become a campus cult.

Dungeons & Dragons

In 1966 Gary Gygax formed the International Federation of Wargamers. By 1971 Gygax and Dave Arneson created a role-play game called *The Fantasy Game*. In 1974 they created the company Tactical Studies Rules (TSR) and published the first Dungeons and Dragons game, originally called The Fantasy Game. Numerous other games of a similar nature were published by TSR (now called TSR Inc.). The D&D basic set was first published in 1977 and the Advanced Dungeons and Dragons (now considered the basic game) in 1978. Most of this material is designed to support characters by "class", so, there are books for those who play wizards, heroes, thieves, and thick tomes on the different kinds of monsters characters might encounter. By 1982 TSR had broken the 20 million mark in sales and in the eighties the games were translated into various languages. These are all board games, meant to be played live, usually by four or more people sitting around a table. TSR provides a kind of scripted blueprint, which the "dungeon master" or game leader, uses as a guide. The Dungeon Master narrates the setting and what the characters have as a goal on this particular "quest" and the players have character sheets which tell them what their characters can do and what items they can use.

Each player chooses a character class to belong to and devises their character. These characters, with some alterations (such as the addition of females) are right out of Tolkien's *Lord of the Rings*: there are hobbits, elves, dwarves, orcs, humans, and wizards, combinations of these, and a wide assortment of monsters taken from other mythologies and folklore.

Every adventure is organised around a map. Games for beginners provide a map, which usually only the Dungeon Master can see; as the adventure progresses, one of the players (not the Dungeon Master) draws where they have been, so that by the end of the quest the players have a complete map of their adventure (as well as some treasure, a lot of going hit points, and a dead dragon or two).

The actual events of the adventure itself are determined by the Dungeon Master, the players and the role of the dice. There are quite a few different dye, each one meant to measure a different aspect of the game. For example, each character has different characteristics, such as "alignment" (which indicates if you are good, evil, or neutral), hit points (how many blows you can take before you "die"), and characteristics such as strength, dexterity, constitution, intelligence, wisdom, and charisma (that last is a measurement of how likely your followers

are to stick with you when the going gets tough). The values for these characteristics change with each play, so that players are required to keep a piece of paper in front of them to mark changes in their status. As if these weren't enough variables, there are also different weapons and armour that characters can wield and wear, as well as spells that certain characters can cast.

It is not surprising that role-playing games became computerised fairly quickly. After all, why be bothered keeping track of all that arithmetic when you can get the computer to do it for you? And why wait to role play until you can get a group of like-minded friends together when you can just go on line any time of day or night?

Muds

What was probably the first MUD appeared in April of 1976. It was a role-playing game called *Adventure* and it was created by William Crowther and Don Woods for ARPANET. In 1980 it was released on commercial machines. According to Espen Aarseth, it died out when graphic MUDs became popular in the late 80s (12). The first MUD to be called MUD was created by Roy Trubshaw and Richard Bartle, two programmers at the University of Essex, in 1980. MUD, (later called MUD1) was not much more than an online chat environment with a series of rooms that characters could move through as they talked to each other. Later characters were given the power to add rooms, but this was rescinded when the rooms got too numerous and chaotic. In the third version player killing was added in order to create a game environment, and MUDding as we know it was born (Powers 19-20).

James Aspnes's *TinyMud* appeared in 1989, and allowed users to build their own textual objects and landscapes, which led them to see themselves as participants in a community and not a game (Aarseth 13). Life in a TinyMud called Abermud influenced Lars Pensjö of Sweden to build *Genesis*, the first LPMud (the acronym stands for Lars Pensjö's Multi User Dungeon). *Genesis* still exists today and boasts 18000 rooms, 7500 saved players, and 1000 players log on each week. It first opened in the spring of 1990.⁴ Pensjö released his lpmud driver and library code which enabled players all over the world to start their own MUDs. One of these was *Angalon*, the MUD I picked to play in order to conduct my narratological analysis, after examining many.

Martijn Fassen, one of the wizards of Angalon, was kind enough to provide me with the following explanation of how MUDs work and how Angalon came into being:⁵

Most MUDs (and MUCKs, MUSHes, MOOs etc) can be seen as consisting of several parts: the MUD server, the core library, and the actual world. The mud server connects people, usually using telnet protocols, to the MUD, and implements the authoring program. The core library implements a set of standard generic objects

(such as a generic room object, a generic non-player character, other objects such as weapons). In some mud server systems most of the standard object implementation is actually hardcoded into the server, but on many other systems (such as lpmud and MOO) the core library is written on top of the server, using a programming language that the server software implements. The library also implements the combat system, and a lot more.

For the actual world MUD programmers (wizards in Angalon) use the generic objects to create their specific objects. They derive their specific rooms from the generic room, their specific monsters from the generic monster, etc. They can configure the object and add new functionality. This style of programming is called "object-oriented programming" and is well suited towards mud programming. The totality of these specific objects that players interact with is called the game world.

According to Fassen, in the early 90s the team running *Genesis* after Pensjö was no longer involved decided to recode the LPMud. The server program and the MUD library were improved, which made the general game look quite different and added various advanced features. In August or September of 1992 an American named Falke, who is still a council member in Angalon, was inspired after playing in a MUD called MIZAR to start his own LPMmud, Angalon, on a computer in Auburn, Alabama. Falke had met Fassen at MIZAR and invited him, as well as others, to be wizards in Angalon in September of '92. About a year later Angalon opened officially for players. Some players have become wizards, and the Angalon gameworld has now diverged significantly from that of *Genesis*. According to Fassen, the wizards are mainly American, but people from all over the world have contributed, especially from Canada, Sweden, Germany and Norway. Currently the mud "Council", which oversees the wizards and the MUD in general consists of four Americans, Fassen from the Netherlands, and an Australian.

Sometime in '93 the MUD had to move from the computer in Alabama to a computer at TAMU in Texas, where the MUD still lives. The original idea behind creating the MUD was to teach people object oriented programming, but pretty soon the "just to have fun" reason took over.

According to Fassen, Angalon is a medieval fantasy because Genesis, its code-model, was also a medieval fantasy; also "Medieval fantasy is also 'easy' for people (both players and wizards) to think about". Fassen himself wrote much of the background mythology for Angalon. It can be hard to tell accurately, but Fassen believes that most of the players are male, with teenagers predominating, but wizards tend to be older, and half the wizards are female.

What does it mean to be a wizard? In Angalon, one gains immortality after completing a number of quests and with immortality comes the status of wizard. Like Dungeon Masters, the wizard can extend the game. Achieving wizard status

is the highest goal of MUD play; but players can also do wrong, for which they get warnings and then banishment. There are not many rules in most MUDs, but there are some. Since Angalon is "family" oriented, no bad language is allowed. A worse sin is to reveal quest information. Wizards spend a lot of time thinking up and implementing quests, so it is considered cheating to make the solutions available to others. Finally (and this is not true of all MUDs), only one character is allowed per player.

Cheating on quests is the most serious offence, and Wizards take drastic action to prevent it. Recently, a player was caught cheating on Angalon and warned, then banned. He then threatened to reveal all the quest solutions unless he was re-admitted. This made the wizards even more determined not to have him back, so he published a website with all of the solutions. The wizards of Angalon responded by shutting down the MUD and are re-programming their quests and re-instating already existing characters one by one.

Overview of Angalon

THE AVATAR

Before you can even get into Angalon, you have to pick a character name and a password. Once in, the first thing you have to do is create an avatar for your character. Here is a sample of the instructions:

You are in chaos, formless stuff, from which all is created. How can you, a creature with form, be here?

Perhaps because your bodily form is still somewhat undefined. You'd better fix that first before leaving. Please select what kind of body you would like.

You can select your race by typing:

select race < race>

If you want to know what you can fill in for <race> type:

help race

You can select your sex by typing:

select sex < sex>

If you want to know what you can choose for <sex> type:

help sex

You can select your appearance by typing:

select appearance < appearance >

For help on <appearance> type:

help appearance

You can check your current selections by typing:

check

Once you are satisfied with your selection and want to continue, type: select body

If you are still confused, just type:

Help race

This is the avatar I created for myself:

> This is how you look:

You are a pale black-eyed elf, presenting yourself as:

Gavaguy novice, male elf.

You look fine.

You are feeling very well.

NAVIGATION IN ANGALON

Once my body was formed, I was able to finally go into the game. Here is the first few that every player sees of Angalon:

> The west end of the town square. Being the center of town, this place is usually buzzing with activity. From here a road travels north towards the mountains and another goes west towards the hills and plains. The town hall is on the southern edge of the square.

There are four obvious exits: north, south, east and west.

A corpse of a guard.

>

The "four obvious exits" tell me where I can go. The corpse is an object that I can play with: I can search it (valuables are to be found that way) and try to pick it up. Gavaguy doesn't like corpses, however, so we leave the corpse where it is. Here is an encounter with a bot:

You are inside a not too small smithy. At the walls you find all the equipment which is needed for smithing. One corner of the floor is covered with coals.

The middle of the floor is dominated by the smith's fire, a huge bellow and the anvil. A metal sign and a cowbell hang on one of the walls.

There is one obvious exit: south.

A strong fearless gnome.

> The strong fearless gnome wipes some sweat from her face.

The strong fearless gnome smells of sweat.

You start to search the smithy.

> Your search reveals nothing special.

The furry calico kitten climbs up your leg.

The kitten is also a bot, one Gavaguy adopted. I found it behind a farm-house in the "newbie farms" (an area of the MUD designed to facilitate new player immersion) and adopted it and carried it with me for the rest of my game-play that day. Every now and then it would crawl on me or knead the back of my neck or purr in my ear. I knew I was getting really addicted to the game when I realized that once I stopped playing and then started again and was chagrined to find that Gavaguy didn't have the kitten anymore.

Here is my first encounter with two other players, one of whom was kind enough to tell me where the "newbie farms" were, (an area of the MUD which is designed to facilitate new player immersion).

A red-eyed menacing orc arrives.

The red-eyed menacing orc introduces himself as:

Matt Apprentice Mercenary and Runt Bonecrusher, wanderer, male orc.

> Matt says: do you know how to search?

> Matt says: heh just type search <whatever>

A massive fork-bearded orc arrives.

The massive fork-bearded orc says: greeting

Matt bows gracefully.

The massive fork-bearded orc introduces himself as:

Tormon the Dastardly Pirate and Bonecrusher and Mercenary, explorer, male orc.

He has scars on his left leg and right hand.

He is wielding a heavy flail in both hands.

He has a demonic tattoo of a fanged raven's head on his left bicep.

He is wearing a black silk shirt, a steel breastplate, a platinum ring and a hunting belt.

He is very tall and lean for an orc.

He looks hideous.

He seems to be feeling very well.

> Matt says: ok go gavaguy!

Here is the text from my first battle, with a scarecrow!

The vicious dilapidated scarecrow aims for your legs with his old plow tooth,

but misses.

The vicious dilapidated scarecrow hits your body with his old plow tooth.

You brush the head of the vicious dilapidated scarecrow with your right fist.

You feel calm again.

You brush the body of the vicious dilapidated scarecrow with your left knee.

What?

> The vicious dilapidated scarecrow aims for your right arm with his old plow tooth, but misses.

What?

> The vicious dilapidated scarecrow bruises your body with his old plow tooth.

84 Alison McMahan

You feel calm again.

You brush the body of the vicious dilapidated scarecrow with your left foot.

You are carrying a brown and green blanket, two rocks and a grey mouse.

> The vicious dilapidated scarecrow aims for your body with his old plow tooth,

but misses.

You smash the body of the vicious dilapidated scarecrow with your left fist.

The vicious dilapidated scarecrow hits your body with his old plow

The vicious dilapidated scarecrow panics!

You are now hunting the vicious dilapidated scarecrow.

The vicious dilapidated scarecrow leaves west.

Get what?

> ss.

The vicious dilapidated scarecrow brushes your body with his old plow tooth.

You brush the body of the vicious dilapidated scarecrow with your right fist.

You feel calm again.

You crush the vicious dilapidated scarecrow with your left fist, brutally.

The vicious dilapidated scarecrow died.

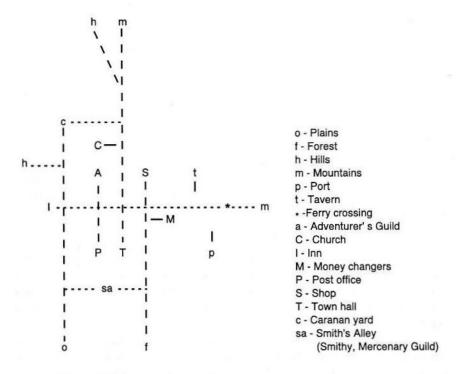
You killed the vicious dilapidated scarecrow.

Since I was the victor in this battle, I got to keep the spoils. Here is a list of everything I was carrying, that I recovered from the dead scarecrow (strange paradoxes become possible in MUDs!) and that I had found:

- > An old, torn sack, an old plow tooth and a disheveled haystack.
- > You get an old, torn sack.
- > You get an old plow tooth.
- > The disheveled haystack is too heavy.
- > You start to search a disheveled haystack.
- > You find a needle!
- > You are carrying a sharp needle, an old plow tooth, an old, torn sack, a brown and green blanket, two rocks and a grey mouse.

Inner map of angalon

> A map of town:



I have only experienced a few areas of Angalon, but I already have my favorites: the place behind the barn where the adoptable kittens are, the shack where an artist orc (he even has a goatee!) draws stick figures with great seriousness, shimmering fields of wheat. These "rooms", as the players and wizards call them, reminded me of some of the work of C.S. Lewis, the other literary forefather of MUDS. Tolkien and C.S. Lewis both agreed that Britain was in need of a new mythology, and they made a deal: that Lewis would write about space travel and he about time travel. Lewis then wrote Out of the Silent Planet, Perelandra, and That Hideous Strength. These books have a marvelous tactile quality in their description of landscape, similar to that of Stanislav Lem's description of the sentient ocean in Solaris which inspired the film by Tarkovsky. The sense of tactility one gets from locations in the work of Lewis and Lem is prescient of MUDs. As they enter each new "room" in a MUD users are aware that someone built it. In Angalon there is even a command for "praising" the room, so that you can leave a little note to the builder of that room, indicating that you found it pleasing.

This leads me to the first part of my analysis of MUDs as a narrative form.

Narrative analysis of MUDs

Edward Branigan, following Chatman, identifies two fundamental types of predication in narrative: the existents, which assert the existence of something (to be), and are usually fixed, and processes, which stipulate a change or process under a causal formula (to go, to do, to happen). Typical existents are characters and settings, while typical processes are actions of persons and forces of nature (5).

What's interesting about MUDs is that the existents, which are fixed in other narrative forms (even other interactive ones, such as event-driven media like CD-ROM games), are fluid in MUDs, and the events or processes (which in a MUD usually consist of bargaining, combat, and rituals), which are fluid elsewhere, in MUDs are relatively fixed. For example, my fight with the villainous dilapidated scarecrow was determined for me: the only part I had in it was to unwittingly initiate it by searching the scarecrow for bounty. After that the battle proceeded without any input from me, including Gavaguy's killing of the scarecrow. This is similar to the outcome of combat being determined by the roll of dice in Dungeons and Dragons. So, processes are fixed, in the sense that the player does not have much control over them. On the other hand, characters and setting, which are fixed in other storytelling forms, are very fluid here in MUDs.

The skilled MUDder doesn't experience a story with a classic Aristotelian structure; rather, he is more like Theseus, wending his way through the minotaur's labyrinth. Instead of a plot sustained by an infrastructure of causality linked to sequentiality, we now have a superstructure in the form of a map. The user alternately struggles or navigates through this space, which, according to Janet Murray, is typically mapped out as a maze (or unicursal labyrunth, as Aarseth puts it)(6-7) a labyrinth, or rhizome (Aarseth prefers "net") (Murray 130-33). But players don't just wend their way through the maps of the MUD; even though it takes time, eventually players can add rooms and props and quests (the fixed process!) to the MUD as well. So setting is fluid, and the goal of every player is to get to the point where they can add rooms of their own.

Character is fluid too. I have already shown how I was able to select Gavaguy's basic appearance and characteristics. As soon as I did that the next thing I had to do was set his basic skill levels for various combat and other survival skills:

> You currently have skill in 21 activities.

sword:	apprentice student	polearm:	novice student
axe:	novice student	knife:	apprentice student
appraise enemy:	seasoned student	club:	novice student
appraise object:	apprentice student	missiles:	novice student
throwing:	novice student	appraise value:	novice student
swim:	junior student	parry:	apprentice student

defence: iunior student climb: apprentice student animal handling: novice student location sense: novice student tracking: novice student novice student hunting: language: novice student awareness: novice student junior student trading:

You have 0 coins left with which to further your education.

Another major part of gameplay in a MUD is to continually upgrade skill levels in certain skills necessary for various quests. Recently Gavaguy joined the Mercenary guild, where he can "learn" certain kinds of fighting, for a fee, of course. And skills that aren't used "downgrade" over time.

Gavaguy can also change in the sense that he can die. That is what Tormon's scars represented: each of them is a sign of one death and resurrection for that character. You lose your possession and skills when you die, but your "experience", still stays with you.

So character death doesn't provide the same sense of closure that it often does in other types of narrative fiction. MUDs, like hypertext novels, are modular, and closure comes from other sources than tying up linear plot elements. A sense of closure can be achieved at first by attaining mastery over the rules of the game; then from accomplishing individual quests, which provide partial closure. Smaller quests add up to bigger quests, and accomplishing enough of the bigger quests can lead to wizard status. Achieving wizard status, when desired, produces an additional sense of closure, but also opens the player up to a whole new dimension of the MUD fictional environment, as wizards manage and add onto the world, devise new quests, and like Falke and Lars Pensjö, develop entirely new MUDs. The modular nature, the degree of user participation, including reader control over non-diegetic elements, makes MUDs and hypertexts very similar. George Landow classifies hypertext fiction as follows:

Hypertext narrative clearly takes a wide range of forms best understood in terms of a number of axes, including those formed by degrees or ratios of (1) reader choice, intervention, and empowerment; (2) inclusion of extralinguistic texts (images, motion, sound); (3) complexity of network structure; and (4) degrees of multiplicity and variation in literary elements, such as plot, characterization, setting, and so forth. (180)

Landow's concept of "axes" as a criterion for categorising hypertexts can be applied to MUDs, as follows: (1) Degree of interactivity (what type, range and frequency of player intervention possible); (2) Analysis of the technical/formal elements, such as the kind of software used to build the MUD, etc.; (3) Structural analysis of the MUD (identification of patterns in the map of the world, for example); (4) Literary analysis of the resulting game experience, which varies

for each player, though certain elements are always common.

The scope of this paper does not allow for a full application of these criteria to a graphic MUD, which I have done elsewhere,⁶ but I will outline such an application by way of example. Let us briefly apply these criteria to the graphic MUD (also available as a stand alone computer game) *Diablo*.

Diablo is a multiplayer adventure game which can also be played by a single player on the stand-alone cd-rom. It was created by Eric Schaefer and David Brevik in 1994 (released by Blizzard, Inc.). The idea was to have a real-time dungeon exploration game with a 3D graphic look. It was aimed at an older audience, and not to teenagers; basically the designers wanted to create a game that they would like to play, a game that an adult could use to blow off steam at the end of a long workday. This means that Diablo is populated by more than 150 types of monsters, mostly of the "evil undead" type, such as skeletons, balrogs, demons, flying gargoyles, and so on (Waters 240-45). The literary source of inspiration is clearly the section of the Lord of the Rings that deals with the Mines of Baldur. There the party, headed by the wizard Gandalf, travels from one level of the mines (a.k.a. "dungeon") to another, and confronts various forms of monster, including a Balrog, that try to prevent them from going further. Diablo's creators have added to the list of monsters considerably. The goal of the game is to use fighting, spells, and some cunning to kill all of the monsters at various levels, and finally Satan himself, who is at the last level. Some quests are built into the game, such as getting an elixir to help the soul of a dead knight travel to its rightful place before it is damned forever. In the process of fulfilling the quests, the player learns the "backstory" of the town of Tristram and of some of the characters and their adventures that led to the world looking the way it does in the game.

The structure of the game is straightforward: certain levels, or dungeons, must be traveled through (all the monsters defeated and quests accomplished), in order to get to Diablo himself, giving the game a string-of-pearls structure. Within certain dungeons (within each pearl) there are certain optional "side" levels with their optional quests, which help the player accomplish his end goal but are not strictly necessary.

The game is visually and aurally stunning, clearly more of a labor of love than other commercial games of this type. The plethora of monsters is staggering, and the use of mood music far superior to that of many similar games. Most interesting to the repeat player is the game's random structure: every time you start a new game you will start with a different quest (the program selects a game for you based on randomness and player skill). (This random structure has since become standard for many games of this type, but few use it as effectively). Other elements such as monsters and treasure to be collected from different characters are also randomized, giving the game a more living feel. Like most role-playing games (RPGs), *Diablo* includes cinematic sequences, such as the introductory cinematic and the closing cinematic which is the player's reward for killing Satan. The multiplayer version allows a handful of people to play the

game together online, enriching the game experience by adding the sense of being part of a team (usually composed of a wizard, a rogue, and one or two warriors). Clearly, graphic MUDs such as *Diablo* enable many young people who read *Lord of the Rings* or played Dungeons and Dragons to fulfill their fantasy even further by participating in such an adventure with other players in a 3D graphic environment.

What makes MUDs different from other narrative fictions is the fluid nature of the existents and the fixed nature of the processes, which are a result of a modular plot construction. The modular plot gives room for player interactivity or participation. This does not make the player a co-author unless the player is a wizard. My analysis shows that applying the theory of levels of narration to MUDs (and probably, to most forms of interactive fiction) is more productive. If we think of actual MUDplay as diegetic, and other aspects of MUDding, such as creating avatars and calculating hitpoints, as non-diegetic, we can apply theories of levels of narration such as Branigan's to interactive fiction. This paper provides the groundwork for such analyses.

Notes

- 1. I use the term "MUDs" generically, to include MOOs, MUSHes, MUCKs, etc.
- The Arthurian legends, in his opinion, were 'imperfectly naturalised", and though associated with British soil were not truly 'English', not in the same way that the Greek the Celtic, the Germanic, the Finnish legend etc belonged to their own soils.
- Interview with Christopher Tolkien, in the documentary about his father, (from documentary called "JRRT: A Portrait of JRR Tolkien" produced by Visuals in 1992).
- 4 From the official Genesis website.
- 5 Personal communication, November 2, 1999.
- 6. See my book, Branching Characters, Branching Plots: An Interactive Screenwriter's Manual, Amsterdam UP.

References

Aarseth, Espen J. Cybertext: Perspectives on Ergodic Literature. Baltimore and London: The Johns Hopkins UP, 1997.

Branigan, Edward. Narrative Comprehension and Film. London and York: Routledge, 1992.

Carpenter, Humphrey. JRR Tolkien, A Biography. NY: Harper Collins Publishers, 1987 (1977).

Castells, Manuel, The Rise of the Network Society, Vol. I: The Information Age: Economy, Society and Culture. Oxford: Blackwell Publishers, 1996.

Landow, George P. Hypertext 2.0: The Convergence of Contemporary Critical Theory and Technology. Baltimore and London: The Johns Hopkins UP, 1997 (1992).

Leonard, Andrew. Bots: The Origin of a New Species, New York: Penguin Books, 1997.

McMahan, Alison. Branching Characters, Branching Plots: An Interactive Screenwriter's Manual. Amsterdam UP, forthcoming (Spring of 2000).

Murray, Janet H. Hamlet on the Holodeck: The Future of Narrative in Cyberspace. New

90 Alison McMahan

YorK: The Free P, 1997.

Powers, Michael. How to Program a Virtual Community. Emeryville, California: Ziff-Davis Press, 1997.

Waters, John K. Diablo: The Official Strategy Guide. Rocklin, California: Prima Publishing, 1997.