Identity Workshop:
Emergent Social and Psychological Phenomena in Text-Based Virtual Reality

by
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AVERAGE AGE		
all	22.3 ± 5.2 years	
women	25.2 ± 5.7 years	
men	21.8 ± 4.9 years	
COLLEGE AGE (17 to 21)		
all	54%	(31/57)
women	22%	(2/9)
men	60%	(29/48)
YEARS MUDDING		
all	1.7 ± 2.0 years	
HOURS PER WEEK SPENT MUDDING		
all	20.2 ± 16.9 hours	
wizards	21.4 ± 19.2 hours	
non-wizards	17.7 ± 11.1 hours	
HOURS HAVE DECLINED SIGNIFICANTLY		
	32%	(18/57)
TYPE OF MUD PLAYED		
adventure-style	43.9%	(25/57)
tiny-style	45.6%	(26/57)
both	10.5%	(6/57)

The majority of players are college-student age. However, those who are not in the 17 to 21 age range are more likely to be older than younger. Few younger people MUD, because most people obtain network access through universities or corporations. Therefore, the average age is above that college age, 22.3 years.

Men greatly outnumber women. However, women are just as likely as men to play the more-violent adventure-style MUDs. However, women players appear to be slightly older and are less likely to be of college student age. The total number of women who responded is small; however, these results are consistent with my anecdotal observations.

There is a tremendous variability in the number of hours people play per week. Thirty-two percent of respondents said that real world concerns have led them to MUD much less than they used to.

Adventure-style MUDs and tiny-style MUDs are equally popular.

Appendix: Survey of MUD Players

In March of 1992, a discussion began on rec.games.mud about the ages of MUD players. I posted a message proposing that people respond to me with the answers to these questions:

1) How old are you?

2) What is your gender?

3) How long have you been playing MU*s?

4) How many hours per week do you play? If the amount you play has changed substantially over time, describe the changes.

5) How many different MU*s do you play regularly (every week)?

6) Do you play primarily adventure-game-style MU*s (Aber, Diku, LP, etc.) or tiny-style MU*s (Tiny, MUSH, MUSE, etc.) or both?

7) Are you a wizard/god/director on any MU*?

I received 57 responses. The data is not a representative sample, because more casual players won't be included. The responses come from people who both read rec.games.mud and bothered to respond to my message. Whether a person is a wizard or god is perhaps an indication of how serious they are about MUDding. Although only a small percentage of MUD players are wizards, 67% of respondents to this survey are. Despite these limitations, the results are interesting:

GENDER		
women	16%	(9/57)
men	84%	(48/57)
WIZARDS		
wizards	67%	(38/57)
non-wizards	33%	(19/57)

Tao says "No one seems to really know"
Tao says "That is one reason I didn't really like the situation"

You say "hmmmn. There's a clause in the Constitution about that!"
You say "you've gotta be charged with something!"

Tao says "The 2 people running the trial are not playing by any known rules.. .that is another reason I don't like the situation"

Mara nods. "And people really do take this stuff very seriously."

Tao says "It is said it has to do with Rape and sexual assault/harrassment"
Tao says "But those 2 things are difficult if not impossible in VR"

You say "You're kidding!"
You say "sexual assault in vr????"

Tao says "people are taking it seriously, the only problem is that the charges are not serious ... they began as a joke that someone pushed public"

You say "is the accused upset?"

Tao can only think of one way someone could successfully Rape or sexually assault soemone in VR
Tao says "No, both the accused and the accuser want to come out unscathed... and both parties know that nothing occured ... But at this point neither can withdraw with out being scathed by public opinion"

You say "wow. It's fascinating"
You say "I suppose virtual rape is still a violation...."
You say "but so much less so"

Tao says "The accused would be thought guilty ... the accuser would be thought promiscuous"

You say "A lot like real life!"

Tao says "Virtual rape is a virtual impossibility ... like I said I can only think of one way for it to occur ... and then the person can always type QUIT"

Mara nods.

Tao says "This would probably make an interesting psychology paper"

Mara laughs. "Yes!"

Mara would teach Tao, were he here.

Tao says "So, what is wrong with dancing till 2AM ?"

You say "but after I MU*, I feel like...."
You say "like I'm a loser"
You say "and I can't explain why I feel that way"

Tao says "No, you are exploring your own personality"
Tao says "At least that is part of the way i look at it"

Mara nods. "Yes. That's the good part."

Tao says "I have learned about myself since I have been mu*ing"

You say "Oh? In what ways?"

Tao watches Mara's psychiatrist light kick on :)
Tao smiles

Mara looks at her toes again. *blush*

Tao says "Well, I have learned some of my likes and dislikes and why"
Tao says "I have had situations here that I have never had in RL and have had to deal with them"
Tao says "I have learned what I think is right and wrong in places"
Tao says "see what I mean?"
Tao says "err read what I mean :)"

You say "Really? Give me an example." {...}

Tao says "For example ... I have had to solve problems with , give orders
too, and deal with subordinates"

You say "That's an important experience."
You say "The time I spent as a manager in RL was very important to my understanding of people"

Tao says "I was faced with the idea of having to serve as defense council for a friend in a situation I didn't like"
Tao says "These experiences have helped me know my self better"

You say "defense council? Is there a court here?"

Tao says "This is on another MUSE"

Mara nods.

Tao says "And they are going through a mock trial that now that I no all of the details of I don't like"

You say "what's the charge?"

Tao says "I am not sure ... "

talk about the impact of attractiveness on interpersonal relationships, about body image, about the transition to an adult relationship with one’s parents, and about projections of intimacy-- the illusion that you know someone well in virutal reality:

> Tao says "you see, I feel I know the person who is 'Mara' ... It took awhile to get to know the true diane"
>
> You say "ah, but you don't really know Mara... it's an illusion!"
> You say "I guess you can project intimacy on people"
>
> Tao says "But I do ... Amy Bruckman is the illusion from this point of view"

At last Tao asks a difficult question:

> Tao says "may I ask you a question?"
>
> You say "sure"
>
> Tao says "Are you going to keep mu*ing now when your paper is complete...?"
>
> Mara looks at her toes.
> You say "I don't know...."
>
> Tao looks at Mara's toes too :)
>
> You say "I'm going to still be working on the paper over the summer"
> You say "you know the section where I wrote about my mixed feelings about MU*ing..."
>
> Tao doesn't know what he will be doing over the summer
>
> You say "I always feel guilty after I MU* a lot"
>
> Tao says "wHy?"
>
> You say "it's a mystery"
> You say "which is I think pretty central to the issues I'm exploring"
> You say "I went out dancing Thursday night"
> You say "and had a *great* time"
> You say "and afterwards I felt good about myself"
>
> Tao says "Good"
> You say "I felt, "I'm the kind of person who goes with 6 friends and dances until 2 on a Thursday""
>
> Tao can't dance
>
> Mara laughs

You say "So what I'm hearing from you is that you want more EMBODIED friends"

Tao says "exactly"

You say "who is diane"

Tao says "things are so much easier in VR ... Diane is a friend of mine in
RL ... we are very good friends"

Mara nods.

You say "in what ways are things easier in VR?"

Tao says "not lovers ... but friends ... a lot of people seem to believe
that a guy and a girl can't just be friends ... but we are"

You say "they can!"

Tao says "I'm not sure why things are easier here ... but they are ...
maybe because of the anonymity factor"

You say "It's a hard question"

Tao nods

You say "Because you have a persona here that you wouldn't just discard"

Tao says "what, you lost me"

You say "so the anonymity isn't because you could become someone else tomorrow"
You say "it isn't easier because you can discard your character"
You say "most people's characters are important to them"
You say "and what people think about the character is important"

Tao says "true ... I never really thought of that"

You say "so then why is it easier?"

Tao says "I have only one active character that is not named Tao and I
dont' like him as much"

Mara laughs!
You say "it's kind of funny... why didn't you like your other self as well?"

Tao says "I don't like Gregory as much because he has no really developed personality ...
I guess I jsut feel kind of fake in him"
Tao says "It is strange"

Tao and I talk about the relationship between having multiple selves in virtual reality and being a different person in different contexts in real life. We

Tao says "both"

You say "wow! Thanks!"

Tao says "I liked it"
Tao says "I learned a lot about myself"

You say "Really? In what way?"

Tao says "Well, in addition to your paper I have been depressed about how lonely I am in RL"
Tao says "and I saw a lot of myself in the people you mentioned and quoted"

You say "In what way?"

Tao says "Well, I realized how much time I do spend mudding ... and how I do sometimes use it as a substitute for RL ... "

Mara nods.

Tao is very lonely[52]

Mara frowns. "I'm sorry to hear that!"

Tao says "I just have to do something"
Tao says "I need love and companionship in RL"
Tao sighs

Tao and I talk about romantic relationships, friendships, sense of self worth, and the ways in which interpersonal relationships are somehow easier in virtual reality. Our conversation lasts three hours and fills twenty-seven pages of transcript.

Tao says "That is one reason I really enjoyed your paper ... it proved that
I am not the only one ... and that i can change"

You say "you need a hobby"
You say "something that will get you meeting new people at school"

Tao says "I have a hobby ... VR remember :)"

You say "Well, you have tons of friends in VR, right?"

Tao says "you are correct ... diane says the same thing"
Tao nods

---

[52]Tao here typed “pose is very lonely,” which appears on both our screens as “Tao is very lonely.” It is common practice to use pose commands to make statements about oneself.

danger because he is neglecting his responsibilities at work. However, DePlane, despite MUDding 80 hours a week, still gets above average grades and holds down a part-time job to make his spending money.

Jenkins writes about the fan folk song "Weekend-Only World" (quoted in Section 2.4.2, *Participatory Culture*) that it "expresses the fans' recognition that fandom offers not so much as an escape from reality as an alternative reality whose values may be more humane and democratic than those held by mundane society." The author of the song "gains power and identity from the time she spends within fan culture; fandom allows her to maintain her sanity in the face of the indignity and alienation of everyday life" [Jenkins 92, pps. 280-281].

Jenkins' claims here are strong, and I do not know whether they are true for fandom or whether they translate to the world of MUDding. However, it is important to recognize that when one makes statements about what is a constructive use of another person's time, one is making a value judgment. Such judgments often masquerade as "taste," and their political and ethical nature can be obscured.

6. Conclusion: TrekMUSE, Two Months Later

You paged[49] Tao with "hi Tao!".[50]

Tao pages: hi, your paper looks great

Tao has arrived.
Tao enters from Deck 5A.

Tao says "hi"

Mara smiles. "Hi Tao!"
You say "did you read the old version or the new one?"[51]

[49]The page command sends a message to someone not present in the same room.
[50]This transcript has been formatted for clarity. Public announcements have been removed. It is otherwise unedited.
[51]My character is Mara. Both "Mara" and "you" are me.

> not people. Mastery can cease to be a growing force in individual development and take on another face. It becomes a way of masking fears about the self and the complexities of the world beyond. People can become trapped.
>
> The computer supports growth and personal development. It also supports entrapment. Computers are not the only thing that can serve this role; people got "stuck" long before computers ever came on the scene. But computers do have some special qualities that make them particularly liable to become traps. [Turkle 84, pps. 207-8]

Not all MUD players are adolescents. However, Allucquere Rosanne Stone observes that "It seems to be the engagement of the adolescent male within humans of both sexes that is responsible for the seductiveness of the cybernetic mode" [Stone 91, p. 108]. Turkle's thesis is that "people are not 'addicted' to test piloting or race-car driving or computer programming. They are addicted to playing with the issue of control" [Turkle 84, p. 210]. People of both sexes and all ages play with issues of control and of identity.

There is an important difference, however, between Turkle's isolated computer programmer who relates better to things than people and MUD players: the world of MUDding is first and foremost social. Virtual reality is in between the world of things and the world of embodied people.

However, not all MUDders are adolescents going through a developmental phase, and not all those who stay in virtual reality are "stuck." Do people who spend most of their time in virtual reality necessarily have a problem? It is difficult but important to make a distinction between issues of addiction and value judgments about how people should spend their time. Peter's warning indicates that MUDding may be habit forming. MUDs can absorb huge amounts of a person's time. If a person begins to feel that the time is "wasted" and regret that MUDding is forcing other activities out of his/her life, but has difficulty stopping, then this is a problem of addiction.

It is tempting but dangerous to impose value judgments on MUD players who are happy with how they are spending their time. Certainly, Foo is courting

Is MUD addiction a serious problem? For some people, it is. In the course of a discussion about stealing and killing other players on MUDs, Peter posted this warning to rec.games.mud:

> This is really kind of a warning to Mudders everywhere. If you are already totally addicted, this isn't going to help one bit (I know, I've been there), because you're going to have to become disillusioned yourself before you are satisfied with what I am about to say. Mudding is an absolute waste of time and energy.
>
> Now you may say that you are having fun, and you may have some goals in your mind (to become a wizard is the usual), but it's a neverending thing, and once you know what goes on behind the scenes, it's no longer fascinating. The final step you may try to take is to try to start your own Mud. This I STRONGLY advise against. If you think Mudding takes up alot of your time, imagine that amount of wasted time multipled by four.
>
> My suggestion, if things like "stealing" and "killing" offend you, is to get as far away from anything resembling a Mud as possible as quickly as possible. There is no future in it, it won't ever provide any satisfying return on your time investment, and you get to meet people who actually introduce themselves to you by their character names. Talk about going off the deep end...

Is MUDding really "addictive"? Peter *was* able to stop MUDding when he chose to. Are there players who would like to stop but don't have the will power? Turkle writes of computer programmers:

> The issue of mastery has an important role in the development of each individual. For the developing child, there is a point, usually at the start of the school years, when mastery takes on a privileged, central role. I t becomes the key to autonomy, to the growth of confidence in one's ability to move beyond the world of parents to the world of peers. Later, when adolescence begins, with new sexual pressures and new social demands from peers and parents, mastery can provide respite. The safe microworlds the child master has built-- the microworlds of sports, chess, cars, literature, or mathematical expertise-- can become places of escape. Most children use these platforms from which to test the difficult waters of adolescence. They move out at their own pace. But for some the issues that arise during adolescence are so threatening that the safe place is never abandoned. Sexuality is too threatening to be embraced. Intimacy with other people is unpredictable to the point of being intolerable. As we grow up, we forge our identities by building on the last place in psychological development where we felt safe. As a result, many people come to define themselves in terms of competence, in terms of what they can control.
>
> Pride in one's ability to master a medium is a positive thing. But if the sense of self becomes defined in terms of those things over which one can exert perfect control, the world of safe things becomes severely limited-- because those things tend to be things,

it *might* be just a game... but to many -- perhaps most -- it is not.

People spend _hours_ in front of terminals working on their characters, their objects, or making wiz, or whatever. When people spend _that_ much of their lives devoted to building something, it is no longer "a game". Also, the interactions that take place between human beings using the computer as a medium are every bit as real as those that take place in person, over the telephone, or whatever. Yet, many people do many things in VR[48] that they would never do in RL (I'm not talking about hacking at fake monsters, I mean in their interactions with other "players", who are really people on the other end).

Some people get their kicks out of having the sort of petty power over other people that high-level chars on LPs, wizzes, gods, etc, have (many use it well, of course, and *someone* has to do it -- I'm not knocking admins -- I was a wiz myself on a now-dead mud). But sometimes they use it by simply bashing all the player files and starting over, for who knows why, just 'cuz it doesn't bother them, and maybe it might be fun to watch all these people squirm and whine. Now I don't know anything about what happened on Orlith, and I'm not trying to make commentary about that specific situation -- but the fact is that this sort of thing happens.

But if you knew someone, who, in RL, suddenly came along and, on a whim, just deleted, say, your 20-page paper, you'd think that person was a jerk -- even if you were writing it on *their* computer and had no "right" to keep it from being deleted.

To say that players on a mud are a dime-a-dozen is to say that *people* are worth no more than a dime-a-dozen. When I was a wiz, I ran into this attitude among my compatriots all too frequently. Whether you're a mortal or not, you need to realize that the "players" on muds have feelings and lives just as real as yours. I've seen far too many people be needlessly hurt.

If you think someone in RL might get upset if you started cursing at them in public -- guess what? They'll probably get upset on the mud, too. <shock -- it's only "just a game"!> The sad part is that people who have too much self-respect and restraint to do those sorts of things in RL often do it through muds, where anonymity and distance protect them.

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[48]The abbreviation “VR” stands for “Virtual Reality.”

5. Mud Addiction

MUDs were banned at Amherst college in early 1992, a step that many colleges and universities have chosen to take. In most cases, MUDs are banned because system administrators are concerned about the drain the games are putting on their limited computing resources. However, there is also often a concern that some students are becoming addicted to MUDs. Felix, an Amherst student, writes on rec.games.mud:

> As to comments about my personal attachment to MUD: If you think I was freaked at the loss of MUD (and when I wrote that article), you are right. If you think I now lay under the covers of my bed, afraid to face the world, you are WRONG. I have as much of a non-MUD life as anyone! In fact, among the Amherst MUDders, I spent comparatively little time on the system- about 20 hours per week. Some of my friends spent four times as much.

Felix's tone is defensive; he appears to be worried about how much of a "non-MUD life" he has. He appears to be trying to convince himself as much as others that he has a life outside of MUD.

In the world of MUDding, 20 hours a week is not much time. Foo MUDs more than 40 hours per week, and DePlane MUDs over 80. This is shocking when one compares that time investment to the hours it would take to play a varsity sport, be on the staff of a school paper, or have a typical social life. For many players, MUDding substitutes for all other social activities.

For some, virtual reality becomes more "real" than real life. Jean Baudrillard called this phenomenon the *hyperreal*. Disneyland is more American than America itself could ever be [Baudrillard 88]. Representations of reality can be more compelling than the real thing. MUDding is not "just a game," as Geoff eloquently argues on rec.games.mud:

> But the simple fact of the matter is that, to MANY players, it is NOT "just a game". Everybody mouths that phrase (usually when it protects their own actions) -- but it's clearly false. Oh, to *some* people,

> This is very odd. I played LPmud once, just to find out what it was like. Since most LP'sdo something hideous with my preferred capitalization of my preferred name, I chose a different name, and thought, what the heck, I'd try genderbending and find out if it was true that people would be nasty and kill me on sight and other stuff I'd heard about on r.g.m[46]. But, no, everyone was helpful (I was truly clueless and needed the assistance); someone gave me enough money to buy a weapon and armor and someone else showed me where the easy-to-kill newbie[47] monsters were. They definitely went out of their way to be nice to a male-presenting newbie... (These were all male-presenting players, btw.)
>
> One theory is that my male character (Argyle, description "A short squat fellow who is looking for his socks") was pretty innocuous. Maybe people are only nasty if you are "A broad-shouldered perfect specimen of a man" or something of that nature, which can be taken as vaguely attacking. People are nice if they don't view you as a threat.

Ellen's point is intriguing, and takes the discussion to a new level of sophistication. In *Group Psychology and Analysis of the Ego*, Sigmund Freud suggests that “love relationships... constitute the essence of the group mind” [Freud 89, p. 31]. Issues of sexual power structure interpersonal interactions, and are more complex than “boy chases girl.” Argyle's description invites a phallic interpretation-- he is short and squat, and the reference to socks carries a connotation of limpness. Since Argyle is clearly not a sexual threat, he receives kinder treatment.

One cannot fail to be impressed by the quality of the netnews discussion, as Sherry Turkle was impressed by listening to small children discuss whether a computer could cheat [Turkle 84]. MUDs are an evocative object for issues of gender and identity in general.

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[46]The abbreviation “r.g.m” stands for “rec.games.mud,” the USENET news group on which this discussion is taking place.

[47]A newbie is a new player with little experience. According to [Raymond 91], the term comes from British slang for "new boy," and first became popular on the net in the group talk.bizarre. A newbie monster is a monster that a low-level player could defeat.

PS No doubt Bill was already replied to. Possibly in spades - which would explain the size this newsgroup grew to over the weekend. If so, then you'll have hit 'k' on the subject anyway if you have any sense[44]. I've read this group for a year or so now, and watched the flamings with interest...how *can* you get so het up about what is, after all, only a game?

Dennis concurs with Carol:

From: Dennis
Subject: Re: MUD practical jokes?
Date: 27 Jan 92 20:27:50 GMT

Carol writes:
>WHat I *do* think is funny is this misconception that women can't play
>muds, can't work out puzzles, can't even type "kill monster" without help.

I played a couple of muds as a female, one making up to wizard level. And the first thing I noticed was that the above was true. 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". Lest you get the wrong idea, there was nothing suggesting about my character, merely a female name and the appropriate pronouns in the bland description. Did I mention the friendly wizard who turned cold when he discovered I was male in real life? I guess some people are jerks in real life too.

Ellen provides an interesting counter point:

From: Ellen
Subject: Genderbending (was Re: MUD practical jokes?)
Date: 28 Jan 92 20:00:24 GMT

Dennis writes:[45]
>Carol writes:
>>WHat I *do* think is funny is this misconception that women can't play
>>muds, can't work out puzzles, can't even type "kill monster" without help.

>I played a couple of muds as a female, one making up to wizard level.
>And the first thing I noticed was that the above was true. 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.

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[44]It is possible to eliminate all postings with a particular subject by using the *kill* command.
[45]Ellen is quoting Dennis quoting Carol. In most news programs, quoted material is preceded by angle brackets. Two angle brackets indicate a quotation of a quotation.

>as the guy wanting me to give him my real phone number, etC. I put it off for
>weeks until the guy was near suicidal stage (don't know if he's roleplaying
>also though :) Then, I finally told him the truth.

I don't think that's particularly funny - but then I play in Britain, so I think that summoning high levels out of peaceful rooms into the midst of hordes of vicious first-levels *is* funny.[41]

WHat I *do* think is funny is this misconception that women can't play muds, can't work out puzzles, can't even type "kill monster" without help. (Okay, I admit we have it on this side of the Atlantic too...) Thanks, guys. When we get JIPS,[42] remind me not to waste my time on Atlantic muds - they obviously suffer from the same defect as those over here. I log on, they work out I am female, and then the fun begins. Oh joy! After all, I don't log on to see whether people have found bugs with my little area, or to dispense arbitrary justice ("Please, Miss, he stole my sword!") or to find a friend. I call Aber-o-rama[43] (for this is the place) expressly to meet little spods who think (I assume) that because I am female I need help. People offering me help to solve puzzles *I* wrote are to going to get very far.

Do you think all women in real life too are the same? We don't squeak and look helpless *all* the time (in my case, only when I am tired and can't be bothered to wire the plug, change a fuse or remove the centipede from the bath (I really should move house...)).

Fortunately things are not that bad on Aber-o-rama. Usually. But if Anarchy carries out his threat of putting the machine running it onto internet, then look out for me...I shall forget my wizard, sign the assassins' handbook, and be out for justice on behalf of all other women who have had their time wasted by people thinking all women behave the way Bill plays his characters :-)

For the humour-impaired: Now don't get on your high horses. All stroppy mail will be cheerfully junked (I haven't that much quota) But remember: that woman you are chatting up happily may one day turn out to Bill - or, worse yet, it may be me, wasting your time. I'll sit there and chat you up too, gauge what you know about the game, and then drop you in any area of the game you don't yet know. If there ain't one, I shall make one first :-)

---

[41]Behavior that would be considered inappropriate on most United States MUDs-- practical jokes, player killing, and stealing from other players-- is the norm on British MUDs. Why this is true is a question worth further exploration.
[42]I have been unable to find out what “JIPS” stands for. If you know, please send me email! I can be reached at asb@media-lab.media.mit.edu.
[43]The name of the MUD has been changed.

on another MUD under different names. When I said I could be reached on HoloMUD, he asked who I was, and we both had a good laugh when the truth was revealed. Sadly, my poor character lost his attention thereafter, but she's resilient...

Another person I encountered did not take such revelation nearly so well. Upon our first meeting, he'd told me of his sorrow at breaking up with a girlfriend, and I tried to be kind and supportive. When it became evident that he was seeking more than friendship, I was faced with a difficult choice. I couldn't lie to him further, but the truth would be painful at a time when he really did not need pain. I couldn't keep dodging his questions about RL. RL intervened by occupying all of my MUDtime, and when we met later on a different MUD, I reluctantly told him the truth. He was understandably hurt and angry, but he got over whatever pain he felt, and our relationship remained amiable.

This taught me a well-deserved lesson, however. It's dangerous to tamper with others' visions of reality. You can distort them much more easily than you think, and you can hurt people.
Please note that this observation applies to myself only.
I won't presume to inflict my beliefs on others.

Andrew's masquerade is a psychological exploration. Bill takes a mischievous delight in deception for profit. Each in his own way has come to understand better how gender structures human interactions.

It is worth noting that the way women are treated in MUDs is not the same as the way women are treated in real life. Men at cocktail parties have never given me skimpy black dresses or requested kisses in exchange for directions to the refreshments-- it is rarely that blatant. However, the treatment of women in MUDs and in real life are not entirely unrelated. Being able to experience rather than merely observe the differences in virtual reality helps people to understand the phenomena in real life.

Carol offers a different response to Bill's posting:

From: Carol
Subject: Re: MUD practical jokes?
Date: 27 Jan 92 09:27:18 GMT

Bill writes:
>Of course, the "bestest" of all practical jokes is for a guy to play a
>female character, pretending that he's female in real life, and getting
>loads of help in the meantime. :) I know, I have done it. Got as far

Most people would acknowledge that gender affects human interactions. Gender swapping on MUDs allows people to experience rather than merely observe this phenomenon. On the USENET news group rec.games.mud, a discussion about practical jokes in MUDs eventually turned to the topic of gender switching:

> From: Andrew[38]
> Subject: Re: MUD practical jokes?
> Date: Sun, 26 Jan 1992 10:01:26 GMT
>
> Bill writes:[39]
> \>Of course, the "bestest" of all practical jokes is for a guy to play a
> \>female character, pretending that he's female in real life, and getting
> \>loads of help in the meantime. :) I know, I have done it. Got as far
> \>as the guy wanting me to give him my real phone number, etC. I put it off for
> \>weeks until the guy was near suicidal stage (don't know if he's roleplaying
> \>also though :) Then, I finally told him the truth.
> \>
> \>Accomplished the same thing to several other "guys" also. There was even
> \>this guy from my campus trying to pick me up on mud. Little did he know
> \>that I live several rooms down the hall from him in the same dorm.
>
> Back when I had time for MUD, I, too, played female characters.
> I found it extraordinarily interesting. It gave me a slightly more
> concrete understanding of why some women say, "Men suck."
> It was both amusing and disturbing.
>
> But there were male players who did impress me. One most gallant
> player I met, coincidentally, on HoloMUD[40]. He was
> courteous and eloquent; such traits were uncommon among the
> male MUDders I encountered in my masquerade. By chance, we both met

---

[38]Postings to USENET have an ambiguous status: are they publications in the traditional sense? Can an author be cited by name without permission? Network news is an informal mode of communication, and most people post articles knowing that they are available for a limited period of time; postings older than a few weeks are deleted. However, in January of 1992, Sterling Software of Bellevue, Nebraska announced the product Netnews/CD. Subscribers to Netnews/CD receive a CD ROM disc each month with all of the previous month's network news postings. As a result, postings are stored permanently and can be searched. This development has alarmed some users. For example, could a potential employer search for all of a person's postings? Could an employer refuse to hire someone based on what he or she posted to talk.politics or alt.sex.bestiality? In this paper, I have chosen to change the names of both people and characters cited. The postings have been otherwise unchanged. Original spelling and punctuation are preserved.

[39]When one person quotes another's posting, most news programs automatically insert a ">" before each line and add a preceding attribution line, such as this one. I have simplified the attribution lines for confidentiality and clarity.

[40]The name of this MUD has been changed.

Regardless of the fate of their romance, it is clear that DePlane has grown as a person through his experience with MUDs. He is no longer alcoholic or suicidal, and he is no longer lonely. He has a large group of net friends, and one of those virtual friendships has become a real romance.

4. Gender Swapping

The impact of gender on social interactions is sometimes subtle in real life, but is obvious in MUDs. New female players are often swarmed with male players vying for their attention. The male players offer technical assistance and gifts of money or objects to help the female player get started. A male player on an LPMud[37] spontaneously gave me a bunny-skin helmet and a black cocktail dress. (The dress functioned as armor.) A male player on TrekMUSE demanded a kiss after answering a technical question. Suggestive comments and winks are common.

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[37]LPMuds are a type of adventure-game-style MUD. See Section 2.2, *Adventure-Game-Style MUDs*.

Delilah's "prob[lem]s deciding what to do" concern her other virtual boyfriend, Nick, a British student she met over the net before meeting DePlane. Nick planned to come meet her over his summer vacation. While DePlane visited Delilah, she worried about what to do about her relationship with Nick. In the end, the now embodied DePlane beat out his still virtual rival.

Delilah is going to fly to visit DePlane in Pennsylvania in a few months, and is considering moving there permanently. Will their relationship withstand more than a vacation visit? Will DePlane and Delilah return to the non-virtual world together? DePlane believes that he will MUD much less if Delilah comes to live near him:

> You say "do you think your life will change if she moves to be with you?"
> You say "I mean your daily life -- the way you spend your day"
>
> DePlane says "Yeah, I will wanna be with her more...I would probly give up one of the two MU*s I play."

Is a real-world friendship more valuable than a virtual one? DePlane states that his MUD friendships "are deeper and have better quality" than the ones he has made in real life. Paradoxically, he prepared for his visit to see Delilah in real life with tremendous enthusiasm. Although sexual interest may be part of his enthusiasm, the situation is not simple. Before they ever met in reality, DePlane and Delilah had text-based sexual relations. "TinySex" is a common occurrence on MUDs.

I asked DePlane whether he now feels differently about the relative merits of virtual and real friendships. He stills feels that his best friends are ones he has made over the network, but he agreed that after meeting Delilah in person "both of [their] feelings intensified strongly," and "the actual physical being there seems to heighten things."

> DePlane says "And gettin totally lost in my character is ALOT of fun, too."

DePlane is a freshman in college. He tells me that he is getting at least B's in all his classes. He has lots of free time, because he likes to sleep only four hours a night. He has few successful relationships with people in real life. Like Foo, he has difficulty expressing his feelings:

> Deplane says "My father was an alcoholic, we never got along, and I became very closed off from the world... always hidin my feelings inside."

On the network he has made friends which seem more real to him than those he has made in real life. He even made a network girlfriend, Delilah. DePlane and Delilah exchanged photographs, talked on the phone, and finally agreed to meet in real life. Deplane flew across the country to meet her in person over spring break. The body of this paper was written while he was away; I left this section temporarily blank, eagerly awaiting his return. I expected disaster, but was glad to be proved wrong:

> DePlane says "Yes, she was so sweet, and kind, and loving...I felt so wonderful next to her...she was even nicer in person than over the net."

It seems at first remarkable that their real-life encounter was not a disappointment. However, perhaps it becomes less surprising when one considers that Delilah spends as much time as DePlane on MUDs. The two spent enormous amounts of time talking in virtual reality before they met in real life. One of the ways in which DePlane and his new girlfriend Delilah are alike, he feels, is that they both "give to others but take so little for [themselves] in return":

> Deplane says "Hmmm...well..like when my Dorm burnt down...yet I had some friends with problems, and I just helped them with their problems, and didn't even mention that....and she does it all the time..when she was havin probs deciding what to do, she was almost in tears one nite I was there, one of her friends called, and she totally pushed her problems out of her mind to help him."

understand the concept of identity and the ways in which we construct ourselves.

People with poor social skills, like those that Foo met at the party, find refuge within the world of MUDs. Paradoxically, that world is first and foremost social. One cannot fail to develop a greater understanding of social phenomena through living within it.

3.2 From the Virtual to the Real: A Romance

DePlane tells me he plays MUDs twelve hours a day. He is not exaggerating-- every time I log on, he is there. He is always there, and is always actively participating. The night I first met him, he announced to all present that he had been logged on for twenty-six hours straight. He asked the crowd to dare him to go for forty-eight. I interviewed DePlane on one of the two MUDs he plays regularly. I asked him how MUDding has affected his life:

> DePlane says "Over the two, I have made very many friends."
> DePlane says "I fell the friendships are much deeper and have better quality than the ones I ahve made in RL[35]."
> DePlane says "The two have also helped me take my mind off of depressing things..."
>
> You say “like what?”
>
> DePlane says "My dorm caught on fir about 4 weeks ago, and I was really upset."
> DePlane says "So I turned heavily to MUDing.”
>
> You say "did you lose all your stuff?"
>
> DePlane says "Yes, almost everything."
>
> Mara frowns. "That's awful."
>
> DePlane says "That was a time when my friends in VL[36] helped alot."
> DePlane says "I also used to be somewhat suicidal, and used to abuse alcohol quite a bit."
> DePlane says "But now I have something much more fun and safe to do!"
> DePlane says "I really enjoy helpin people on this, it gives me a feelin that I'm doin something useful with my time."

---

[35]The abbreviation "RL" stands for "Real Life."
[36]The abbreviation “VL” stands for “Virtual Life,” which is the opposite of “RL” or “Real Life.”

displays a detailed knowledge of Britain. On further questioning, Jack tells me he is trying to decide whether to return to Britain or continue his studies in America. What does it mean to be British or American? Jack is exploring his sense of national identity in virtual reality.

In *Childhood and Scoiety*, the psychoanalyst Erik Erikson writes of a four-year-old girl who was brought to him because of a bed-wetting problem:

> The child indicates clearly that I will not get anything out of her. To her growing surprise and relief, however, I do not ask her any questions; I do not even tell her that I am her friend and she should trust me. Instead I start to build a simple block house on the floor. There is a living room; a kitchen; a bedroom with a little girl in a bed and a woman standing close by her; a bathroom with the door open; a garage with a man standing next to a car. This arrangement suggests, of course, the regular morning hour when the mother tries to pick the little girl up "on time," while the father gets ready to leave the house.
>
> Our patient, increasingly fascinated with this wordless statement of a problem, suddenly goes into action. She relinquishes her thumb to make space for a broad and toothy grin. Her face flushes and she runs over to the toy scene. With a mighty kick she disposes of the woman doll; she bangs the bathroom door shut, and she hurries to the toy shelf to get three shiny cars, which she puts beside the man. She has answered my "question": she, indeed, does not wish the toy girl to give to her mother what is her mother's, and she is eager to give to her father more than he could ask for. [Erikson 85, p. 49-50]

Erikson states that "We offer her a toy situation so that she may reveal and commit herself in its 'unreality'" [Erikson 85, p. 52]. The virtual world of dolls and blocks created a safe space in which the little girl was able to express her feelings. Virtual worlds, whether they are made of blocks of wood or blocks of text, form a rich psychological play space.

Foo has a good knowledge of who he is as a person, both on and off the net. He is sensitive to the moods and personas of his friends. He clearly understands the concept of identity. MUDs are a workshop for the concept of identity. Many players notice that they are somehow different on the net than off, and this leads them to reflect on who they are in real life. It helps people to

> One of the things I found that you'll find a lot in the personalities of people who MUSH is that the person is someone that's kind of like underneath, the person who's underneath and hidden but doesn't want to come out. Like when Gayle is upset and she comes on, she comes on as Susie, the Vulcan that's kind of attached to me. So she'll come on and she's just like "hi, how ya doin," I'm like "oh fine," and I'll hang out and I'll talk with her. And she's really upset and she doesn't talk to anybody about it, but she'll talk to me. You know, she's the kind of person who doesn't.... She's a lot like me "well I'll try to deal with it myself." And then the person she talks to is me, you know, if she's really feeling upset about something. I mean, I'm sure she has friends down there she talks to as well. But she's like "I can't believe I just told you that.'"
>
> It seems like the people on the net, the kind of stuff that they do is stuff that they want to do, but for some reason they don't. I don't think I'm anywheres near as silly as I am on the game, you know in real life, I'm just a very kind of in general pretty serious person and kind of go through things the right way. On the game I'm just like (*silly sound*) what the hell, let's have fun! Who cares! And if someone pisses me off, I'm just like "shut up, punk." I mean, you saw it last night when I was sitting there ragging on that guy who was saying (*whining*) "well, we'll boot you" and I was like "c'mon, I dare you, you little punk!" And I was laughin my butt off on a channel with Cheech. And he was like "dude, man, you're sounding really vindictive!'" and I'm like "I'm having fun with this guy! I'm toying with him." He goes, "That's not what he thinks! You should see the stuff he's paging me!'" And I'm like "Oh, OK."

Gayle is overweight and has a large chest. She has different characters for different moods: Renata is gorgeous and sexually desirable. Marla is petite and flat chested. Susie is an emotionless Vulcan. Gayle uses these personalities to help sort out her feelings about her real self.

Foo has chosen a character description that is similar to his real self. His character is an emotionless Vulcan. Foo tells me that he has trouble expressing emotions and tends to always try to work things out himself. He has not had any romantic relationships for the last two years, because he feels overwhelmed by other people making demands on him. However, on the net, his behavior is entirely different. He is outgoing, cheerful, silly, and loved by all. While he normally represses any anger he feels, on the net he delights in expressing it. On the net, he is who he wants to be.

Examples abound. Jack is a British student studying in America. He logs onto MUDs in the morning when it is afternoon in Britain and many British players are on. He enjoys confusing them-- he tells them he is in America, but

description is “this stunning beautiful green-skinned woman walking around naked.” You know, Orions are the Orion slave girls, that's the whole point.[32]

Amy:
Oh, right, of course!

Foo:
So, that's her description there. One of the things that she says a lot on TINY2[33] as Marla, she's like always “You don't like me because I'm flat chested." And she is the **farthest** thing from flat chested, but she says that all the time, just to... I have no idea why! {...}

To the people who know her in real life she always throws a little smile up on the end, you know- the little :), and we're all like 'yeah, yeah, sure, whatever' and, but to everyone else, I mean like Hal when he first met her, he was absolutely convinced she was going to be flat chested from the way she kept talking about being flat chested. So he envisionned this kind of short, petite, little woman of nothing, basically. And he's like “Well!'“ (*laughs*) So, maybe that's why in most of my descriptions I try to keep them, kind of something similar. “Foo is 6'1", Vulcan with black hair, straight black hair, and pointy ears” or something, and “kind of a red tint about his skin.”

Amy:
Are you supposed to be a Vulcan?

Foo:
Yeah, I related to the character immediately when I came on, like, I wanna be a Vulcan.

Amy:
But you're too silly to be a Vulcan![34]

Foo:
I'm Vulcan's first comedian, so that's the way I... I just.... There's something to be said for the.... If you've grown up in a family where, in a situation where you're the kind of person who represses your emotions or whatever, because you feel like you don't, you can't express them to people, or you feel that they won't understand. That's the kind of thing I grew up with, with my family. My parents are great. They're very loving, very understanding parents, but I just couldn't relate to them. I was-- both my parents are blue-collar workers, they graduated from high school, had no collegiate hopes, and I'm just... a freak! I'm a complete freak in the family! {...}

I never really felt like in my family I had someone I could share with. So Vulcan was just kind of automatic for me, because it's just like-- oh, OK, I'm a Vulcan! (*laughs*) So, I mean it's not like I'm kind of this repressed walking emotional bomb or anything, because you know everybody's got friends, but it's just that, that's the kind of way I grew up. Until I got here at college where I kind of figured out who the hell I was and stuff.

---

between two people in virtual reality does not imply one in real life. The story of DePlane and Delilah is an exception. (See Section 3.2, *From the Virtual to the Real: A Romance*).

[32]Orions are a race on the television series *Star Trek*.

[33]The name of this MUD has been changed.

[34]In the television series *Star Trek*, Vulcans are a race of purely logical beings who have no emotions.

> people, where the larger culture finds meaning in the half-defined and the merely suggested. [Turkle 84, p. 223]

Why are people who fit the personality profile Turkle describes attracted to computers and to MUDs? Perhaps one draw is the fact that in virtual reality you can escape your physical body and create a beautiful, sexually attractive self with a line of text. The non-sensual person is instantly sensual. Social relationships are less threatening: at any time you can always create a new character and start over.

It is important to note that not all MUD players fit Foo's description of the people at the TINY2 party. Foo himself does not, and his experiences at a second party were quite different:

> I went to another TINY2 party this weekend. Many of those from the dreaded other party were there, along with over a dozen other people that I have never met before. It would appear that some of my interpretations of the first party were unfounded. Many of the people I met there were a little idiosyncratic, but this time, these idiosyncracies were _normal_! There were the typical clueless geeks and nerds, but the overall representation more closely resembled that of 'average' society. There were comp sci types, a journalist, a sociologist, a history major, a psych major, art-fag types (you know, all in black), fashion bugs, metal heads, just a lttle bit of everything. It was much more life-affirming. :)

Foo's description of the people he met at the first TINY2 party captures a common stereotype. The persistent appearance of the stereotype indicates that it has some significance. However, it is unclear what portion of the community fit that description.

Foo tells me more about the people at the first party:

> Amy:
> Did you find a lot of people who were unattractive who had character descriptions that were "Tall, handsome, and..."?
>
> Foo:
> Well, Gayle[31] is the perfect example. Gayle is... facially, she's attractive, but she's really overweight, and all of her character descriptions-- Renata on Trek is an Orion and the

---

[31]Gayle plays three characters: Renata, Marla, and Susie. One of Foo's characters is engaged to Marla. Marriage ceremonies and even divorces often take place on MUDs. A relationship

Foo:
I had to leave soon, so I stayed half an hour, maybe an hour or something, and I was **completely** uncomfortable there. I've never seen such a group-- this is going to sound really harsh-- of socially inept people in my life. It really seemed like Hal, Greg and I were the only normal people there. It was just-- frightening! (*laughs*) I couldn't fathom it.

But for some strange reason I decided I'd go back Saturday. The whole thing didn't get better. So we went back to Tip's apartment, but then we had to go back from Tip's apartment because even us talking was too much noise. So we went over to Roger's house . Roger wore the klingon costume again on Saturday. Everyone else was wearing normal clothes. He decided he'd wear the costume. My image of that weekend that sticks in my mind and that absolutely frightens me (*laughs*)... Roger has all of the School-House Rock videos. You know like from when we were kids all the little, you know like the Constition Song and the guy who (*sings*) 'well I'm a bill and I gotta be passed in the law'-- the whole thing.

Amy:
Oh yeah! I know them well!

Foo:
Yeah, I mean, they're great, they're cool. Roger (*laughs hard*) stood there in a Klingon outfit in his house in front of the TV playing school-house rock, singing and dancing to it, for everybody else's entertainment.

Amy:
(*laughs*) In a Klingon costume!

Foo:
It was so sad. And I just couldn't... I...

Amy:
And it wasn't funny, it was more pathetic than funny?

Foo:
(*laughs*) They were getting a kick out of it! That made it even worse to me! I was just like... Does nobody else find this **frightening**?? I mean, I was just really worried that god, I'm gonna grow up and be like this? I mean it was like if I wanna be a hacker, I'm gonna end up like this? Dancing around in a klingon costume? In front of a TV? Playing school house rock?! I was so frightenned! God, it was horrible!

Foo's image of himself is threatened by the poor social skills of his peers. Not all MUD players are computer scientists; however, the MUD culture is sister to the hacker culture. Turkle writes of the hacker culture:

> Through these descriptions emerge the large outlines of the hacker culture: a culture of mastery, individualism, nonsensuality. It values complexity and risk in relationships with things, and seeks simplicity and safety in relationships with people. It delights in ambiguities in the technological domain-- where most nonscientists expect to find things straightforward. On the other side, hackers try to avoid ambiguity in dealing with

Like Jenkins, I choose to study the phenomenon from within the community. The guidance of Sherry Turkle has provided the important counterpoint of a more distanced perspective.

3. Identity

I approached the task of becoming a part of the TrekMUSE community with a mixture of delight and guilt. As I have loved computer games, pinball, and science fiction over the years, I love MUDs. However, it is a guilty sort of pleasure. When I play, I feel that I *ought* to be doing something else. I worry that I am wasting my time. I fear that I am being a nerd.

Many MUD players share these fears. Foo plays MUDs more than forty hours per week. He is logged on all day at work, and is always playing, except when his boss is looking. The name "Foo" was originally given to him by his fraternity brothers, and he now uses it as his character name. Foo is twenty-two years old, and has been delaying finishing his last few requirements for his undergraduate computer science degree. I interviewed Foo in person, on audio tape.

3.1 From the Virtual to the Real: A Party

Foo once attended a weekend-long real-life party of people who had met on a MUD. People came from all over the country to meet their net friends in real life. Foo is handsome and well dressed, and tells me that he was depressed by how unattractive everyone else at the party was. He is afraid that if he stays a part of the MUD community, he will become like them. On Friday night of that weekend they had a costume party:

> why is Gibson's writing so popular? Why has it sparked a movement?

The fifth paper, the one you are reading, is on Multi-User Dungeons. It became apparent to me that cyberspace and virtual reality *already exist* in MUDs, and fascinating social phenomena have emerged from them.

To try to understand MUDs, I began to read the USENET news group rec.games.mud,[29] and try out various MUDs on the network. After a month of peeking into different communities, it became clear that to understand them, I would have to become an active part of one of these communities. Since I am fond of *Star Trek*, I chose TrekMUSE.

In making the decision to become part of a community, I dived head-first into the methodological debate about distance from the object of study. Jenkins writes about fan culture both as an academic and as a fan:

> Does this color what I say about fandom? Almost certainly, which is why I am acknowledging it at the outset. In a recent critique of ethnographic work on audience resistance, David Sholle warns of the dangers of overidentification with the research subject: "the stance of the ethnographer... must still to some extent retain a dimension of distance from the situation. There is a danger of taking up the standpoint of a fan and thus confusing one's own stance with that of the subject being studied."[30] While conceding that such a risk (media study's particular version of "going native") is present in writing an ethnography from within the fan community, I must note as well that this danger is not substantially lessened by adopting a more traditionally "objective" stance. In the past, scholars with little direct knowledge or emotional investment within the fan community have transformed fandom into a projection of their personal fears, anxieties, and fantasies about the dangers of mass culture. This more distanced perspective did not ensure a better understanding of the complexity of the phenomenon so much as it enabled scholars to talk about a group presumed incapable of responding to their representation [Jenkins 92, p. 6].

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[29]USENET is a distributed bulletin board system. Particpants may read and post articles to news groups on specific topics. There are discussion groups for a wide variety of technical, recreational, and political topics. For example, I read mit.bboard (a local group for announcements of events at MIT), comp.lisp.lang.mcl (a group for discussingthe programming language Macintosh Common Lisp), alt.aquaria (one of several groups for discussing fish tanks), and rec.games.mud (a group for discussing MUDs). For more information on the computer network and network news, see [Raymond 91].

[30]Sholle, David (1991). "Reading the Audience, Reading Resistance: Prospects and Problems." Journal of Film and Video 43 no. 1-2, 80-89. Cited in [Jenkins 92].

questions about their readings in cyberpunk, science fiction, and fantasy. I asked about their interest in video games, computer games, and computer programming. To attempt to understand their conceptions of themselves, I asked about their hobbies as a child, their athletic ability, their fashion sense, and their politics. Finally, I asked each person what they would like cyberspace to be like. The interview ran a different course with each subject since I let myself be guided by their interests; however, this is the general form that the conversations took.

What emerged from these interviews was an understanding that I was working on at least five different papers:

- *Why do all these things (computer programming, fantasy literature, science fiction, video games, computer games, role-playing games, and the like) go together?*

- *The body:*
  Why do people want to escape from their physical bodies and into cyberspace? Can we apply the theories of Michel Foucault and Donna Haraway to the emerging cyberspace?

- *Visions of the future of cyberspace:*
  What do visions of the future of cyberspace reveal about an individual's psychology and the impact of technology on people?

- *William Gibson's fiction, the text as read:*
  Gibson's fiction portrays a bleak future. Human relationships are fragmented, and adolescent rather than adult in character. The natural environment has disappeared into one big urban sprawl. The only admirable occupations are stealing other people's data or being a simstim[28] star. The people who actually do legal, productive work in cyberspace are portrayed as drones, and those who use simstim are addicted idiots. Racism and sexism are rampant in Gibson's writing. Given these facts, why is

[28] In Gibson's fiction, simstim is a form of entertainment like television. Rather than merely watching a story, the viewer experiences all the emotions and sensations of the star. This is accomplished by stimulating the viewer's brain directly.

It can broadly be defined as referring to networked multi-person communications, and is closely related to *virtual reality*, the use of computer technology to create simulated worlds. Fiction about cyberspace is often called *cyberpunk*, a term coined by the writer Bruce Sterling [Sterling 86]. What is the relationship between *cyber* and *punk*? In what ways are the fiction and the reality of cyberspace compelling visions? How do technology and fantasy shape our construction of ourselves?

My inspiration for asking this particular set of questions comes from my studies with Professor Sherry Turkle and her book *The Second Self: Computers and the Human Spirit* [Turkle 84]. It is also a deeply personal exploration. I learned to program computers my freshman year of high school, 1979, and became part of a community of people who "hung out in the computer room." I was the only girl in the computer room. At that same time, I also began to read science fiction, read fantasy literature such as Tolkein, play video games, play computer games, and play Dungeons and Dragons. Most of the serious programmers shared all these interests. My friend Jonathan Feldschuh did a survey of the ten computer room regulars, and found that nine of us had read Tolkein. Most of us had read the four-book series more than once. The tenth stopped hanging around the computer room soon after the survey was taken, and became student technical director of the theater instead.

Why do all these interests go together? I believe that answering this question is a key to help understand the emotional appeal of cyberspace technology.

My methodology is also inspired by Sherry Turkle's work. To begin to answer these questions, I posted an electronic mail notice asking cyberspace researchers and readers of cyberpunk fiction to volunteer to be interviewed. I interviewed eleven people for one to two hours each. I began by asking

2.4.2 Participatory Culture

Why are these fictional worlds so popular? The world of MUDs here intersects with that of *fan culture*. Fans of *Star Trek* attend conventions, write stories and novels, make videos, and write folk songs about the *Star Trek* world. In *Textual Poachers, Television Fans and Participatory Culture*, Henry Jenkins analyzes fan culture with an emphasis on fan reading and writing practices [Jenkins 92]. Like MUDs, the world of fandom is an alternative reality that many participants find more compelling than their mundane lives. The conclusion of Textual Poachers is called "'In My Weekend-Only World...': Reconsidering Fandom," and begins with this epigraph from a fan writer:

> In an hour of make-believe
> In these warm convention halls
> My mind is free to think
> And feels so deeply
> An intimacy never found
> Inside their silent walls
> In a year or more
> Of what they call reality.
>
> In my weekend-only world,
> That they call make-believe,
> Are those who share
> The visions that I see.
> In their real-time life
> That they tell me is real,
> The things they care about
> Aren't real to me.
> [Burnside 87, quoted in Jenkins 92, p. 277]

The boundaries between real life and virtual reality will be discussed further in Section 5, *MUD Addiction*.

2.5 Methodology

I began this project by investigating issues of cyberspace and the self: Why do people want to be in cyberspace? Who wants to be in cyberspace? Cyberspace is a term originally coined by the writer William Gibson [Sterling 86].

Perhaps the most popular theme for MUDs is Anne McCaffrey's *The Dragonriders of Pern* series of fantasy books. In McCaffrey's fiction, a person bonds for life with a dragon. The dragon and its rider become telepathically linked, and achieve a level of intimacy that is not possible between two humans. The color of a rider's dragon confers status within the community.

2.4.1 Social Hierarchy

All the themed MUDs which I have observed have hierarchical social structures. This is perhaps because the fictional worlds in which they are based are hierarchical. In TrekMUSE, participants have ranks in opposing para-military organizations. I asked a director of TrekMUSE why ranks are necessary. He replied that it gives people something to strive for. The MUSE software was based on the egalitarian MUSH software, but includes a ranking function. This function was originally created for administrative reasons-- experienced players who were willing to help maintain the MUSE were given responsibilities and privileges. On TrekMUSE, the feature was adapted to add social hierarchy back into the system. Thus, social hierarchy was eliminated and then was gradually added back in.

MUDs can be seen as a workshop for exploring issues of social hierarchy. Is a hierarchical structure necessary for coordinating human group behavior? How do people obtain status within communities? The world of MUDs does not mirror reality; however, it brings the issues to the forefront and helps one to begin to think about them. In Turkle's terminology, MUDs are *evocative objects* [Turkle 84].

A TrekMUSE player comments in the excerpt at the beginning of this paper "At 3:30 am ... we talk and hang ... at 3:30 PM there tends to be a lot of role-playing." Since I am in the navigation department of the Yorktown, when I role play I control the ship's navigation systems, obeying orders from the commanding officer on duty.

My character is a member of the B'joran race, an oppressed people modeled after the Kurds or Palestinians. In the television series *Star Trek: The Next Generation*, B'joran characters are presented as rebellious and disrespectful of authority. It is therefore part of my job as a good role player to talk-back to authority and occasionally disobey orders!

Each ship on TrekMUSE is a community within the community. Each ship has its own communication channel. Anything spoken on the ship's channel is broadcast to all crew members logged on. When anyone from the Yorktown logs onto TrekMUSE, it is customary to say hello on the ship's channel. It is not customary to greet everyone on the MUSE. Everyone on a ship knows one another. When I first joined the Yorktown, I was swarmed with friendly invitations to get acquainted, like "Hi Mara! I've heard a lot about you!" It is a warm, social environment.

Ships are grouped into empires. The Yorktown is a member of the Federation of Planets. Petty rivalries exist amongst ships in the Federation. When one officer on the Federation Starship Enterprise announced that the Yorktown was a "bucket o' junk," this provoked a friendly shouting match, rather like what might occur between rival high schools. When the Federation was attacked by the Romulan Empire, however, such rivalries were forgotten and the members of the Federation joined to fight the common enemy. The community has a complex structure.

authoritarian control. Solar power is more compatible with decentralized, democratic control; however, it does not require it. In the case of TinyMUD, the technology *is* a social system. It is therefore remarkable that the social changes TinyMUD caused were not intended by its founder. Aspnes writes that "this approach attracted people who liked everybody being equal." Somewhat accidental features of the artifact combined with a process of *self-selection* to create a community with a strong, shared set of values.

2.4 Themed MUDs

Some Tiny-style MUDs are organized around fictional worlds borrowed from commercial mass culture. These themed MUDs form a special subset of Tiny-style MUDs. Participants take on variations of roles from the fictional theme world. Activity on themed MUDs includes role playing as well as the usual building and casual socializing. The theme shapes the design of the game and provides a shared body of knowledge and interests for participants.

I chose to become a part of the community of a themed MUD: TrekMUSE (see Section 2.5, *Methodology*). TrekMUSE is based on themes taken from the television show *Star Trek: The Next Generation*. On TrekMUSE, my character's name is "Mara." I am an Ensign in Starfleet. I interviewed with commanders on multiple ships before I was offered a commission aboard the USS Yorktown. Earlier that day, I received a letter stating that a conference paper I had submitted was rejected. When I logged onto TrekMUSE that afternoon, I was depressed. When I was offered the position on TrekMUSE, I forgot entirely about my conference paper. I had new friends, and new roles to experiment with. Why worry about a minor setback in real life? I was Ensign Mara of the USS Yorktown, the acting flagship of the Federation!

what has been built. MUDs which grow unchecked tend to overwhelm the capacity of the computer they are running on and eventually get shut down.

The first MUD of this variety was called "TinyMUD," and was written by James Aspnes of Carnegie Mellon University in 1988. The egalitarian and pacifist values of Tiny-style MUDs are quite different from their predecessors. Where did these ideals come from? Did they come from they founding members of the community? I asked this question of James Aspnes:

> You raise an interesting question about the ideals of the TinyMUD community coming from the few founding members. Most adventure-style games and earlier MUDs had some sort of scoring system which translated into rank and often special privileges; I didn't want such a system not because of any strong egalitarian ideals (although I think that there are good egalitarian arguments against it) 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 being equal and drove away people who didn't like a game where you didn't score points and beat out other players (I did put in a "score" command early on since almost everybody tried it, but most players soon realized that it was a joke). I think that this effect created a kind of natural selection which eventually led to the current egalitarian ideals. I like the egalitarianism, but it wasn't my original goal.[27]

This is a confirmation of Langdon Winner's assertion that artifacts have politics [Winner 86]. The change in the software encouraged different styles of interaction, and attracted a different type of person. The ethics of the community *emerged*. The design of the software was a strong factor in shaping what emerged.

Are values inherent in technology or in the social systems in which technology is embedded? Winner concludes that it depends on the specific situation, saying that "Rather than insist that we immediately reduce everything to the interplay of social forces, the theory of technological politics suggests that we pay attention to the characteristics of technical objects and the meaning of those characteristics" [Winner 86, p.22]. For example, nuclear power requires

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[27]Electronic mail conversation with James Aspnes, February 29th, 1992.

> GOAL
> There is no ultimate goal to this game, except to have fun. There are puzzles to solve, scenery to visit, and people to meet. There are no winners or losers, only fellow players. Enjoy.

Most non-adventure style MUDs allow all participants to build onto the world. Players can create objects, and rooms, and write programs to make objects function in interesting ways. My first object was a plate of spaghetti that "squirms uneasily" when anyone in the room uses the word "hungry."

In these MUDs, status within the community is achieved by building. People strive to achieve mastery not over the virtual world but over the programming language in which the world is built. Foo, a player we will meet more closely later, found it disturbing at first that most of the world seemed to be already built. It took him a great deal of thought to find a project that was important, original, and within his programming abilities:

> I wanted to do something everybody could use. I wanted to be important. Everybody gets to that point-- they want to build and they want to show off. {...}[26]
>
> It's kind of a Freudian phallic thing, I guess-- that need to create. I mean, that's what I very much wanted to do. And to find out that I couldn't was kind of disturbing. I think that's why when games start up everyone comes on right away, because they can create all these things and say "isn't this neat-- this is what I built." "I built the combat system on this game" or "I built this" or "I built that." {...}
>
> That's what I think a lot of the people love to do, and that's why a lot of the games go (*expanding sound*) so fast. But it needs something more to keep it around.

Foo eventually did complete several significant projects, and as a result was made a wizard on more than one MUD. As Foo points out, MUDs which allow building tend to expand rapidly. Each game has its own mechanism for limiting how much each person can build and monitoring the over all quality of

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[26]The symbol "{...}" will be used to indicate that text has been ommitted. Three dots without brackets indicates a pause or change of topic in a spoken conversation.

"What is a 'Wizard' on an LPmud?"

> An LPmud Wizard is a player who has 'won' the game, and is now able to create new sections of the game. Wizards are very powerful, but they don't have the right to do whatever they want to you; they must still follow their own set of rules, or face the wrath of the Gods.

One Saturday in January of 1992, I adventured all day on an AberMUD in Norway called DIRT.[23] One wizard there enjoyed adventuring with our group of new players and being our big brother and protector-- he got us back our magic items when we died, he kept the party together by magically summoning people when they got cut off from the group, and he cast high level spells to help defeat the monsters we encountered. Another wizard logged on played a god-like role. He appeared from the sky and said mysterious things. He took on alternative magical persona such as "Puff the Fractal Dragon." He was aloof and all-knowing.

Erik Erikson writes that "The playing adult steps sideward into another reality; the playing child advances forward to new stages of mastery" [Erikson 85, p. 222]. The majority of MUD players are college students.[24] For most players, MUDding is in between these two approaches to play. The drive to become a wizard is part of a desire to achieve mastery. Mastery over the game confers status within the community.

2.3 Tiny-Style MUDs

The other class of MUDs (TinyMUDs, TeenyMUDs, MUSHs, MOOs, MUGs, and MUSEs) have a different philosophy, as the following notice from QWest[25] makes clear. There is an entry in the help system on the topic "goal":

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[23]DIRT is at ulrik.uio.no 6715, or 129.240.12.4 6715.
[24]See the Appendix: *Survey of MUD Players*.
[25]Qwest is at glia.biostr.washington.edu 9999, or 128.95.10.115 9999.

MUD1 and Scepter of Goth were based on the role-playing game Dungeons and Dragons, and were written in late 1978 to 1979.[21] They were also based on early single-user text adventure games, such as the original ADVENT by Crowther and Woods [Raymond 91, p. 31]. Currently popular types of adventure-game MUDs include AberMUDs, DikuMUDs, LPmuds, and UnterMUDs. In adventure-based MUDs, the object is to kill monsters and obtain treasure in order to gain *experience points*. As a character gains experience, he/she/it becomes more powerful.

In most adventure-style MUDs, once a character has attained a certain level of experience or completed a set of quests, he/she/it can become a *wizard* or *god*. It typically takes a player hundreds of hours of playing time to become a wizard. Wizards and gods have the ability to extend the game world, and have almost total power over other players. These communities have a hierarchical social structure.

The MUD-FAQ[22] contains these entries on wizards and gods:

> "What is a 'Wizard' on TinyMUDs/a 'God' on LPmuds?"
>
> Wizards/Gods are the people who own the database. They can do whatever they want to whomever they want whenever they want. A more appropriate name for them would probably be 'Janitor', since they tend to have to put up with responsibilities and difficulties (for free) that nobody else would be expected to handle. Remember, they're human beings on the other side of the wire. Respect them for their generosity.

---

[21]The earliest multi-player games existed on stand-alone time-sharing systems. In 1977, Jim Guyton adapted a game called mazewar to run on the ARPAnet. Participants in mazewar could duck around corners of a maze and shoot at one another, but could not communicate in any other fashion [email conversation with Jim Guyton, March 1992]. Numerous multi-user games based on the Dungeons and Dragons role playing game appeared in 1978-1979 including Scepter of Goth by Alan Klietz and MUD1 by Roy Trubshaw and Richard Bartle [email conversation with Alan Klietz, March 1992]. Many of the authors of these games can be reached on the network and are pleased to talk about their work. My research into the history of multi-user games is ongoing.

[22]The MUD-FAQ, the list of frequently asked questions for the newsgroup rec.games.mud, is available via anonymous ftp from moebius.math.okstate.edu (139.78.10.3) in the directory pub/muds/misc/mud-faq.

Typing “out” gets you to 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, complete with roaring fire. 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.

This description is followed by a list of objects and characters present in the living room. LambdaMOO is organized around the metaphor of a large, rambling house.[20] Many MUDs have a medieval setting. For example, in most AberMUDs, players begin in a medieval village church. The compass directions, as well as in, out, up, and down are used to navigate.

Each MUD is different. The type of MUD specifies the software in which the MUD is built. Thus, the center of town is similar for most AberMUDs, but the mountains, castles, and forests outside of town are built by the administrators or *wizards* of the specific game. In some kinds of MUDs, all of the players help to build the world. Who has the right to build and how building is monitored is a key feature that distinguishes types of MUDs. Langdon Winner cites Marx and Wittgenstein in making his claim that “social activity is an ongoing process of world-making” [Winner 86]. In MUDs, this is true in a literal sense.

2.2 Adventure-Game-Style MUDs

While every MUD is different, there are two basic types: those which are like adventure games, and those which are not. The earliest MUDs such as

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[20]The letters “MOO” stand for “Mud Object Oriented.” The MOO programming language is superior to that of any other MUD that I know of. LambdaMOO is filled with imaginative, well-designed objects. For a general introduction to LambdaMOO and mudding in general, see [Curtis 92].

programming environment in which this virtual world is constructed help to hold the community together.

2. Introduction

2.1 MUDs, MUSEs, MUSHs, and MOOs

As of March 6th, 1992 there were 143 multi-user games based on thirteen different kinds of software on the network.[16] [17] I will use the term “MUD,” which stands for “Multi-User Dungeon,” to refer to all the various kinds.[18]

When a person first logs onto a MUD, he or she creates a character. The person selects the character’s name and gender, and writes a description of what the character looks like. It is possible for a character to be male or female, regardless of the gender of the player. In many MUDs, a character can also be neuter or even plural. A plural character could, for example, be called swarm_of_bees or Laurel&Hardy.

MUDs are organized around the metaphor of physical space. When you connect to LambdaMOO[19], you see the description:

> 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. There's a new edition of the newspaper. Type 'news' to see it.

---

[16]“The network” links computers world wide. The majority of people who have access to the network are university students, computer professionals, and defense contractors; however, network access is becoming more widely available.

[17]Games are constantly being created and destroyed. A current list is regularly posted to the USENET news group rec.games.mud.

[18]The abbreviation “MU*” is often used to refer to the union of all the different kinds of multi-user games, since the names of most begin with the letters “M” and “U” and “* ” is commonly used to represent a wild card. Strictly speaking, a MUD is a specific type of MU*. Which abbreviation one chooses to use for the generic case can be seen as a political question, since it raises issues of inclusion and exclusion in the community. I have chosen to use the abbreviation “MUD,” because it is more natural to pronounce.

[19]LambdaMOO is at lambda.parc.xerox.com 8888, or 3.2.116.36 8888.

Krag announces "Hey now. I'm the self-proclaimed Whine Steward. Back off. ;)"

Tao chuckles

Fitch announces "are you related to Patrick Steward? Oh, sorry."[11]

Tao was slightly lagged[12]

Public announcement from player #16216 'Edi': "@give Krag = BOOT TO THE HEAD."[13]

You say "so i guess folks do more hanging out than role playing"

Rev announces "That's Patrick Stewart."[14]

Cheech announces "*sigh*"[15]

Fitch announces "close enough :-)"

Tao says "depends ... at 3:30 am ... we talk and hang ... at 3:30 pm there tends to be a lot of role-playing"

Mara nods.

Tao says "sometimes late can be more fun ..."

The conversation is multi-threaded and multi-layered. The participants have fanciful character names, and may or may not choose to discuss their real identities. This particular environment is organized around a theme: the television show *Star Trek: The Next Generation*. The *world* is organized into starships, starbases, and a central place called the *hub of intergalactic peace*, a common space where people congregate. References to *Star Trek* and to the programming environment in which this virtual world is constructed help to hold the community together.

---

[11]Fitch is making a joke that perhaps Krag's *Whine Steward*, is related to *Patrick Steward*, a deliberate misspelling of the name of one of the actors who plays a lead role on the television series *Star Trek: The Next Generation*.
[12]Tao is complaining that the computer is slow.
[13]This is another pun on the MUSE programming language. To give something to someone, you would type "give someone=something." To give someone money without their being notified, you would type "@giveto someone=<amount of money>."
[14]Rev probably has not understood Fitch's joke, and is correcting the spelling of the actor's name.
[15]Cheech is probably exasperated by Rev's failure to understand Fitch's joke.

anything which is *announced* is seen by all thirty-six people logged on.[5] Our private conversation-- about gender roles and the ways female characters are swarmed with attention[6]-- is interwoven with a public conversation filled with computational puns and *Star Trek* references:

Tao says "I have noticed that female char's have that prob ... a friend of mine is playing a female to see if it is true ... and he says it is"

> Krag announces "@set me = Bored Don't tell me I'm gonna have to >work<..."[7]

Tao says "You can never be sure ... but I gurantee you I am male"

You say "it doesn't really matter to me"

> Rev announces "Okay, I won't. :)"[8]

> Tao announces "Krag, we didn't set you Whine_ok"[9]

You say "but it does make ya wonder"

Tao nods[10]

Tao says "of course it does"

Mara laughs!

> Agora announces "You're gonna have to >work<... >;)"

> Cheech announces "Yeah, I'm bored to but I sort of promised not to make any more trouble for awhile..."

---

[5]The transcript has been formatted for clarity. It is otherwise uneditted. The original spelling and punctuation are unchanged.
[6]These issues are discussed further in Section 4, *Gender Swapping*.
[7]This is a joke based on the MUSE programming language, the computer language in which this virtual world is constructed. For example, to make yourself visible, you would type "@set me=visible."
[8]This is a smiley face. It is common practice to add faces made out of punctuation marks to news postings to add emotion or emphasis. For example, ;-) is a winking face, which is often used to indicate irony. Emotions may also be expressed with words beginning and ending in asterisks such as *sigh* or *groan*.
[9]*Whine_ok* is a pun on the flag *enter_ok* used in the MUSE programming language. To allow things to be put inside a box, you would set the box to be enter_ok. Note that in addition to talking to me, Tao is participating in the public discussion.
[10]Characters can speak or pose. If I type "say hello there," it would appear in this transcript as "You say 'hello there.'" To Tao, it would appear as "Mara says 'hello there.'" If I type "pose laughs!", it would appear as "Mara laughs!", as it does below. In this line, Tao typed "pose nods," which appears as "Tao nods."

Identity Workshop:
Emergent Social and Psychological Phenomena in Text-Based Virtual Reality

by
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> "We offer her a toy situation so that she may reveal
> and commit herself in its 'unreality.'"
> -- Erik H. Erikson[1]

1. TrekMUSE, 3:30 AM

It is 3:30 AM EST, and I[2] am talking to my friend Tao[3] in my quarters aboard the Federation Starship the USS Yorktown. Actually, I am in Massachusetts and Tao is in South Carolina. We are logged onto a Multi-User Simulation Environment (MUSE) based on a *Star Trek* theme.[4] At this moment, there are thirty-six people logged on from all over the world. My character name is Mara. Anything I say or do is seen by Tao, since he is in the same *room*;

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[1]From *Childhood and Society* [Erikson 85, p. 52].
[2]Substantial sections of this paper emply the first person for two reasons. First, the nature of the "I" is part of my topic. Second, I believe in the value of situated knowledge.
[3]All names have been changed, except where otherwise noted.
[4]TrekMUSE is located at excalibur.mit.edu 1701, or 18.80.0.247 1701. To connect to it, type "telnet excalibur.mit.edu 1701" from a computer on the Internet. For additional practical information on how to access multi-user games on the network, read the list of frequently asked questions (FAQ) regularly posted to the USENET news group rec.games.mud. A current list of available MUDs is also regularly posted to that newsgroup. For all MUDs mentionned in this paper, I will either provide a network address or note that the name of the MUD has been changed for reasons of confidentiality.

Table of Contents

Version history:

3/29/92	First draft
4/5/92	Corrected typos; added Foo's new remarks about the second party