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VIRTUAL WORLDLINESS: WHAT THE IMAGINARY ASKS OF THE REAL

DR. RICHARD A. BARTLE*

Virtual worlds are persistent, computer-mediated environments in which a plurality of players can interact with the world and each other. From their humble beginnings, virtual worlds have evolved to become major hubs of entertainment, education, and community. With this growing real world importance, however, has come greater scrutiny from real world institutions. Virtual world developers are now experiencing a degree of accountability to which most are unaccustomed and of which many are deeply wary. For their part, real world institutions have discovered a large, shaggy animal in their yard that was not there yesterday and that does not behave quite the same as the usual beasts they encounter.

Designers of virtual worlds have a duty to understand the laws that apply to their creations, but the people who make and interpret these laws also have a duty: to understand virtual worlds. If they do not understand what they are regulating, how can they hope to regulate it?

At the moment, virtual worlds are regulated by a set of industry “standards,” or design principles, unilaterally imposed by their developers. This paper seeks to describe what these design principles are, why they came to be, and what would happen were they to be weakened. Part I describes the history and early development of virtual worlds. Part II outlines the characteristics of virtual worlds that differentiate them from other forms of computer games. Part III discusses the intrusion of the real world into virtual worlds and what the effect of court-based regulations might be on virtual worlds in general. Part IV summarizes the various aims and goals of virtual worlds, calling for courts to understand them before making any decisions that would undermine them. This paper makes no argument for or against these virtual world design principles from a

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legalistic point of view; it merely states the way things work now, so that legal experts may be better informed in their deliberations.

I. HISTORY

Twenty-five years ago, in the days when mainframe computers had less computational power than today's digital watches, I sat down with my friend and fellow undergraduate, Roy Trubshaw, to discuss the design of *MUD*.

MUD ("Multi-User Dungeon") was the world's first virtual world, although we did not know that at the time. We knew it was an imaginary place that many people could visit simultaneously; we knew that players could freely interact with one another in the context of the world we were creating; we knew that the world was entirely defined by software, but that it only *lived* in the imaginations of the players.

We also knew (although up until now we hadn't actually said it) that, despite the fact we referred to it as a game, *MUD* was something else entirely. It was what we would now call a "virtual world."

So it was, in an out-of-the-way seminar room where we had found a terminal so dumb it didn't know it wasn't supposed to let us use it, that the subject of content arose. Roy had spent much of his time up until then programming the underlying code needed to support the virtual world.¹ However, there was not much of a virtual world to support: a handful of rooms (to test the concept of "room"),² a handful of objects (to test the concept of "object"), a handful of commands (you get the picture), plus a full-blown system for adding new rooms, objects and commands on-the-fly. Everything was now in place: so what was the world going to look like?

Roy had written *MUD* to be a game. He could have written it to be an educational model of the human body, or a travelogue of Venice, or some kind of textual map for blind people to read using Braille, but no, he had written it to be a game. In part, this was

1. Although this sounds laborious, for Roy and I "playing with code" was a leisure activity.

2. That is, making sure that the way the code implemented the concept of a location (i.e. room) was good enough that we could then write in terms of "rooms" rather than abstract data structures.

because only a game would attract sufficient users;³ however, that was not the main reason. The main reason was that only the pretext of being a game gave Roy⁴ free rein to create an entire world from his imagination. Who wouldn't seize upon the chance to make their imagination real if it were offered them?

Roy deferred to me when it came to the game aspects of *MUD* because of my relatively strong background in gaming.⁵ I had a better appreciation of what would and would not work in a game context; Roy joked that it was as if I had a game design manual hidden in my head where no-one else could read it. I found Roy's observation interesting. Up until that point, I hadn't really given the notion of content⁶ itself much thought. I had pictured places I wanted to construct and the objects and beings I wanted to put in them; I had figured out what players would do there, and what would happen when they did it. However, it hadn't occurred to me that I was working to an implicit, non-obvious rule-set born of experience. Now, I realized I was.

Roy thought up a puzzle — something to do with a castle and a lake shaped like a key. It was a good puzzle for a single-player adventure game, but I could immediately see it would not work in *MUD*. While the puzzle was being solved, it would lock up a good deal of the world, thereby spoiling it for everyone else; it was linear, forcing players to run on rails and offering them little choice of how to solve it; it had no *replay value* — if it was solved once, it was solved forever; and finally, it required rooms of radically different conceptual sizes that would just feel *wrong* to the players. However, in this flood of reactions to Roy's suggestion, two thoughts came through that made the rest seem petty: *This isn't a game, it's a place!* and *I want to go there!* I suddenly felt as if I was the first human being on a new planet.

3. Or, more cynically, people who would willingly spend their precious allocated computer time testing the software.

4. Roy had been the only one to write code for *MUD* up to this point.

5. I had run my own postal games magazine for two years, and had a game published as a result. See RICHARD A. BARTLE, *THE SOLO DUNGEON* (1978). It was a book version of what would now be classified as a hypertext game.

6. This is a term that appeared in the mid-1980s in the context of virtual worlds, used to describe "what there is to do." If players of virtual worlds are regarded as consumers, content is what they consume.

I described my views to Roy. *MUD* should be a place — a world — that lets players *do* whatever they wanted to do (within the context of its physics), and *be* whatever they wanted to be (within the context of their own personality). The phrase I used was “open-ended.” If people wanted to play it as a game, as most perhaps would, then to them it would be a game. If, however, they preferred to wander around enjoying the scenery or poking things with sticks, that was fine too. We would provide the world; the players could take from the experience of visiting it whatever they had use for.

Roy was persuaded, so we adjourned for a cup of hot chocolate from the vending machine.⁷

II. THE VISION

I always knew what virtual worlds promised: freedom. Freedom to do, to be, to realize.⁸ This kind of freedom is a good thing; virtual worlds are a force for good. Furthermore, what we have at the moment is just a foretaste of the wonders yet to come. Of course, things are never quite that simple.

In designing *MUD*, Roy and I had made a number of assumptions that did not stand up when challenged by the players. In our defense, we did foresee most of these; we simply put off acting on them until forced to by circumstance. Nevertheless, eventually they became problems.⁹

I am going to describe some of these problems now, and how they were resolved. As a result of their resolution, several design principles have emerged. As long as these design principles are

7. We drank hot chocolate because the coffee tasted, ironically, of mud. The hot chocolate merely looked like mud.

8. Strictly speaking, this should be “virtualized,” as I mean it in the sense of making the imagination non-imaginary (i.e. “real” under normal circumstances, but “virtual” here). Designers want freedom in the designing of virtual worlds every bit as much as players want freedom in the playing.

9. Some assumptions have stayed the course and are only now being challenged. For example, the excuse of “you do not have to play if you do not want to” to stave off people who complained about the way the virtual world was run, all the while knowing that, actually, if all your friends are in the virtual world then you may feel you do “have to” play even though you do not really “want to.” In other words, I knew “social capital” existed, but dismissed its significance. The reason why I did this will shortly become apparent, but that is not to say I necessarily *should* have done it.

respected, the problems are manageable. If the principles were to be disrespected, the problems would return. If the problems were to return, then either a new solution must be sought or the vision of virtual worlds as places to indulge imaginations would be lost forever. The principal concern: the notion that virtual worlds are game-like spaces; the necessity of their evolution; and the exploration of identity.

Those charged with making decisions which might strike down these principles must therefore balance the desirability of doing so against the desirability of not having virtual worlds disappear as a result.

A. *The Game Conceit*

When people play games, they agree to abide temporarily by a set of rules which limits their behavior (i.e., restricts their freedom), in exchange for which they gain whatever benefits the game offers. Game theorists refer to the boundary that separates the game world from the non-game world as *the magic circle*, from an early description of play-spaces by Johan Huizinga.¹⁰ Virtual worlds are not games, but they use the game conceit — that some freedoms must be willingly given up for a time in order that new freedoms can be experienced during that time.¹¹ For example, in the real world, a young man may find it awkward talking to young women because he fears rejection. He is prepared to accept the rules of a virtual world in order to talk to young women¹² in a context where rejection does not matter so much (i.e., he gains a freedom that he does not have in the real world). He can then learn from his experience and apply it back in the real world. What happens, though, when someone does not play by the rules?

10. JOHAN HUIZINGA, *HOMO LUDENS* (Beacon Press 1971) (1938).

11. The subject of giving up selected freedoms to gain greater freedoms has a long history in Philosophy, stemming in the main from THOMAS HOBBS', *LEVIATHAN* ch. 14, available at <http://www.gutenberg.net/etext/3207> (last visited Oct. 29, 2004). I shall not, however, discuss this here except to note that the debate exists; my purpose is descriptive, not normative.

12. As has become traditional, I hereby dutifully caution that there is no way of knowing if a female character has a female player behind it.

Suppose you were one of three people playing the game Clue,¹³ and that you were close to winning. The person playing Mrs. White suddenly leans over to the person playing Colonel Mustard and says, "I'll give you \$20 if you show me your cards." Colonel Mustard obliges, Mrs. White pays up, and promptly announces that Reverend Green did it in the ballroom with the candlestick.

Understandably, few players would be pleased if this happened to them. Although there are no *written* rules in Clue about bribery, there are, nevertheless, *unwritten* rules that say this kind of activity stops a game from being a game.¹⁴ You would probably think twice about playing with Colonel Mustard again, and three times about playing with Mrs. White.

In a virtual world, what can one player do if another player is suspected of bribing a third player or otherwise stepping outside the boundaries of "play"? Well, that person can simply stop playing with those they regard as cheats. However, this would also mean stopping playing with perhaps several thousand other people, some of whom might be very good friends.

Perhaps the person's friends will stop playing too, and then they can all move to some other virtual world where the game conceit still holds. Unfortunately, there is no guarantee that the miscreants will not simply follow them to this new world (anonymously or otherwise). So the players can either: grin and bear the situation; try to prevent the miscreants from playing (or at least repeating their scam); or quit entirely in disgust.

With *MUD*, I knew that people might break the unwritten rules that protected its virtual world from the real one. Some indeed did so. Individually, they were usually easy to deal with; I would speak to them and explain the problem: it was unfair to the other players if they behaved however they were behaving, and please would they stop.¹⁵ Most understood and obliged. Those that did not were reminded that I had my finger on the off switch for their character and that I could therefore obliterate them entirely if I so chose. Some, very few, I did obliterate entirely.

13. Or Cluedo, as we call it in the United Kingdom (where it was invented). *See generally* Cluedofan.com, at <http://www.cluedofan.com>.

14. Furthermore, there are an infinite number of them. *See* KATIE SALEN & ERIC ZIMMERMAN, *RULES OF PLAY* 129 (2003).

15. If there were tens of thousands of them, this approach would not work so well.

The justification for doing this was quite simple. To discover why, we need to look at the rationalization commonly employed by the people who broke the unwritten rules.

Virtual worlds are unlike board games in that their written rules are coded into them.¹⁶ In *Clue*, all that stops me from moving my token more than the dice roll says I can move it is the alertness of the other players; in a virtual world, you do not get to teleport unless the code says you do.

The subversive players claimed that the code *alone* defined *MUD*. They did not recognize the existence of unwritten rules (i.e., the game conceit). Their view was that if the code let them do it, they could, legitimately, do it. They argued that this was how regular computer games worked, and this was how *MUD* should work. If an activity is not permissible, why did the software not prevent them from doing it in the first place?

The answer is that there are some things that virtual world developers simply cannot stop using software alone; trivially, they cannot prevent people from swearing (although they can make it difficult).¹⁷ Less trivially, should you be able to stand in a doorway thereby blocking people from entering a room? Well yes, if your aim is to prevent a thief from entering and stealing all of your wounded friend's equipment, but no if your aim is to annoy the hell out of someone racing to help their friend inside who is being beaten to a pulp by an ogre. However, maybe yes if that other player bought the last magic sword yesterday even though they did not need it, just to stop your character from getting it. The variance in acceptable and unacceptable motivations prevents any broadly written code to filter such behavior properly.

Without recourse to artificial intelligence techniques that have yet to be invented, a virtual world's code cannot hope to trap this kind of antisocial behavior — even though it arises *inside* the virtual

16. Board games do have certain *unwritten* rules coded into them, too, by their mere physical existence. In *Clue*, for example, you cannot make your character occupy two rooms simultaneously because the universe does not permit it. Such rules are unwritten because they do not *need* to be written — they cannot be broken anyway.

17. There is a town in the United Kingdom called Scunthorpe. Do you ban all reference to its name (as AOL's ever-vigilant profanity-filters originally did when they saw the second-to-fifth letters) or do you allow reference to it in the full knowledge that people will then start using it as a profanity?

world. The attitude of the antisocial players to this was simple: “tough.” They argued that in computer games it was the program, not the players, that defined the rules. Only the code could dictate what they did. Swearing at people was fine because it was allowed by the rules as defined by the code. If I did not want people to swear, I could always take out the communication commands.

Taking out the communication commands, however, would have ruined *MUD*. Instead, I added a command, FOD (“Finger of Death”). If people swore, I FODed them. Their characters disintegrated. Using the subversive player’s logic, the program *allowed* me to do it, so it must be fine. It did not allow anyone *else* to do it unless I set the flag on their character, but it allowed *me*.

Virtual worlds are played by rules. The rules are written (embodied in the code) and unwritten (embodied in the expectations of the players). People can deny the existence of unwritten rules, but they cannot deny the existence of coded rules. If the code says that you cannot walk through walls, you cannot walk through walls. If the code says you can shoot arrows around corners, you can shoot arrows around corners. If the code says I can obliterate your character, I can obliterate your character. You may be able to pick and choose which cultural norms to obey, but you do not get to pick and choose which rules of the virtual world’s physical universe to obey — and the administrator’s authority in a virtual world is *embodied* in those rules. You do not swear, because if you do you will be disintegrated. You do not do *anything* that the administrator does not want you to do, because if you do you will be disintegrated. Some things that administrators object to are understandable,¹⁸ some are more ambiguous,¹⁹ and some are completely arbitrary.²⁰ All, however, are *part of the rules of the virtual world*. If you play, they are enforced with the same authority as any other rule.

Strictly speaking, then, the dissenters are correct. Anything the virtual world lets its players do, they can indeed do. Their deci-

18. For example, virtual world for counseling rape victims (and there are such places) might dismiss journalists who turn up faking having been raped in order to get a story.

19. For example, a virtual world created for worshipers of religion X (and there are such places, for different values of X) might dismiss members of religion Y who turn up hoping to participate in a ritual or service.

20. For example, I don’t like the cut of your jib.

sion of whether they *do* it or not is entirely moderated by what the virtual world lets its more powerful players do should they dislike it. For most virtual worlds, the administrators are rational.²¹ Those that are irrational tend not to have many players; if you do not like the rules, you choose not to play.

So here is the first point I want to make. Virtual world administrators have absolute control over their world vested in the mechanics of that world. As long as this design principle is respected, administrators can protect the game conceit. If they were denied absolute control, then the game conceit must be protected some other way; otherwise, the virtual world would be just another extension of the real world.

B. Evolution

Virtual worlds are continually evolving. New content is added, old content is updated, exploits are curtailed, bugs are removed, and gameplay is rebalanced. If virtual world designers were unable to make changes to their virtual world, that world would become stale, dated, dominated by exploits and its gameplay would become completely disjointed. While it is possible that a relatively stable state could be achieved, one with few bugs and exploits remaining and enough player-generated content appearing for it to retain its freshness;²² it would take many years to get a virtual world into this position. Even then, occasional changes would still be called for.

What happens when players object to a change?

Here is an example to illustrate the kind of thing that happens. One day, I added a rabbit to *MUD*. There was a player with a character called Rabbit at the time. Because of the way that objects in *MUD* are referred to by unique, case-insensitive nouns, the moment I created a rabbit, the character named Rabbit was unable to play. I knew this would happen, but I wanted a rabbit for a puzzle I had in mind. I offered the player a name-change, and he accepted.

If he had not accepted, I would have added the rabbit anyway. Otherwise, players would have taken the names of likely new addi-

21. In this context, rationality is defined by consistency and not necessarily the normative concepts of correct and incorrect.

22. For example, I have not added new content to the original *MUD* since 1985, but people still play it.

tions to the virtual world and sat on them.²³ This had indeed happened in the past; a player, anticipating that I might want to put a vampire into the virtual world, created a character called Vampire to stop me from doing so until I “compensated” him. Needless to say, the ruse did not work.

Changes to a virtual world affect different characters (and hence different players) in different ways. Suppose a virtual world has two classes of fighter, the warrior and the paladin, where the paladin is the same as the warrior except for being more powerful against evil foes; after a time, the designer notices that there are many paladins and few warriors. Because there are many paladins, fewer evil creatures are around as they keep being slaughtered. The paladins could kill non-evil creatures, but this would be harder for them so they do not want to do it. Instead, they complain about how boring the virtual world has become, and that there should be more evil creatures about.

The designer can address this problem in many ways, of which adding more evil creatures is but one. Ultimately, the root cause of the problem is that there is an incentive for players to be paladins rather than warriors, but no disincentive. If more players were warriors (or fewer were paladins), the problem would go away. Thus, the designer decides to make a change such that paladins are weaker against non-evil foes. Paladins are not attacking these anyway, so should not care. Players now have a choice to play as warriors (and be equally effective against all kinds of foes), or as paladins (and be more effective against evil foes but less effective against non-evil foes). The virtual world should be better as a result.²⁴

Why is it, then, that although most players of paladins are pleased with the change, some are unhappy about it? “You nerfed paladins!”²⁵ The answer is that although they did not attack non-evil foes before, they at least had the option to do so. This option has now been removed from them. If they had known they were

23. A decade later, this practice, when applied to Internet domain names, became known as “cybersquatting.”

24. Note that there may be other avenues of resolution which may make the virtual world better yet.

25. Nerf (*vb*): to render less effective; taken from the NerfTM brand of safe-play toys.

going to have this option removed, perhaps they would not have chosen to be a paladin three months ago when they started playing.

Also, some players of warriors complain. They do not know why, but this new patch to the virtual world has somehow reduced the number of killable things. Previously, they could walk into a field filled with orc children that they could slaughter with wild abandon, but now when they stroll along, sword in hand, the field is already half empty. If they had known this was going to happen, maybe they would not have chosen to be a warrior three months ago when they started playing. The warriors complain because whereas in the past there were few warriors, the change in the rules has persuaded more players to become warriors, therefore there is more competition for warrior-speciality resources (e.g., orc children). In order to give the paladins more to kill, the warriors have been given less. Both, however, now have enough.

In general, even the tiniest changes to gameplay can have repercussions that ripple through the entire virtual world, affecting things not immediately connected to them. In-context economies²⁶ are particularly good in this regard; a slight adjustment in the way that a non-player character²⁷ computes the value of a sword would affect the price that it paid for swords, which in turn might have an impact on the amount a sword-smith could afford for raw materials, and so on, the consequences gradually propagating throughout the virtual world as supply and demand react. Perhaps, as a result of the new sword-valuation policy, there is a 0.01% fall in the price of pig iron in a distant market. This change would not be noticed by most players, but it could seriously annoy the merchant who has 100,000 units of pig iron in a warehouse there. If this could be foreseen (which is possible, if perhaps unlikely), would it be a reason not to make the initial change to the way the non-player character values a sword?

Virtual world designers have to take all these things into account when they decide whether or not to change their virtual

26. An “in-context economy” is one designed into the virtual world, whereas an “out-of-context economy” contains elements the virtual world knows nothing about (e.g., US dollars).

27. A non-player character (“NPC”) is a character in a virtual world that is controlled by the virtual world itself (using artificial intelligence techniques). This contrasts with a player character (“PC”), which has a human being controlling it.

world. Any alteration that gives something to one group of players will *by definition* take something away from another group. The decisions are hard, and mistakes are often made, but ultimately they are for the designer alone to make. A wise designer will explain what is happening and why, thus preparing the players for the change while giving them the opportunity to voice objections. Ultimately, though, the designer must weigh the odds in terms of what is best for the virtual world as a whole.

Here, then, is the second point I want to make. Virtual world administrators cannot please all their players all the time, no matter how fair they try to be. They must, on occasion, change the virtual world in ways that some — perhaps all — of the players will find unpalatable. While this design principle is respected, and designers are able to ignore players' opinions, the virtual world can continue to evolve and improve. Anything that served to limit this process would limit the virtual world's evolution.

C. *Achievement*

Many people play virtual worlds as a way to explore their identity.²⁸ Virtual worlds do this by delivering to the players an experience amounting to a *hero's journey*.²⁹ Not all virtual worlds are set up for this,³⁰ but most are. Similarly, not every player plays for this reason,³¹ but most do (although few of them necessarily realize this).

In those virtual worlds set up to guide players along their hero's journey, the notion of *achievement* is critical to success. Players must feel that that they are advancing, that the advancement is

28. See RICHARD A. BARTLE, *DESIGNING VIRTUAL WORLDS* ch. 5 (2003).

29. See generally JOSEPH CAMPBELL, *THE HERO WITH A THOUSAND FACES* (1949). This is far too detailed to explain at length in this paper, but essentially there is a pattern followed by much of myth, ancient and modern, that takes an individual on a journey to a world of adventure (i.e., a *virtual world* in our case) where challenges are met, foes defeated, aspects of the self confronted, and identity asserted. As a result, the individual is a more complete person than they were before they made the journey. In virtual worlds, the undertaking of a hero's journey is, for many players, the ultimate source of the fun they derive from playing.

30. For example, educational virtual worlds.

31. In particular, designers playing virtual worlds do not see them in the same way as do regular players. This is similar to the way that movie directors take different things from a movie than do regular movie-goers.

worthwhile, and that there is some definite goal that indicates they have “won.”³² Most virtual worlds, therefore, have a mechanism that allows a quick comparison between characters — normally a system of *levels*, with higher-level characters being more advanced than lower-level ones. Although, strictly speaking, they do not have to have something like this to facilitate a hero’s journey, it certainly helps. Furthermore, if they do have such a system then they are implicitly offering a hero’s journey whether they want to or not (but in almost all cases they *do* want to offer it).

An important point to note here is that the character reflects the state of advancement of the player. In general, a player who is close to ending their hero’s journey will play a character that is of a very high level.³³ Players use their relative status to establish their place in the social order; someone of a higher level is “better” than you, as you are “better” than someone of a lower level. Players undertake actions in the virtual world that cause their characters to go up levels, thereby showing to the rest of the world (but mainly to themselves) just how good a player they are becoming. It is in the interests of all players on a hero’s journey to do this; if you do not accept a metric that says some players are better than you, you cannot hope to use that same metric to judge the improvement in play of your future-self over your current-self.

This value system would all fall apart if there were not a strong correlation between a character’s level and its player’s experience. It does not matter so much that if you see a low-level character then it must have a low-experience player behind it; the critical deduction is that if you see a high-level character then it must have a high-experience player behind it. If this reasoning were not true, then when you became a high-experience player, how would anyone (least of all you) recognize your quality?

Virtual world designers implicitly understand this, and will ensure through the virtual world’s design that only those characters belonging to players who genuinely *are* good at what they do reach

32. Unfortunately, few modern commercial virtual worlds actually have this final step, mainly because developers are afraid that once players feel they have won they will stop playing (although, perversely, this is not really something that need concern them). However, the idea of “winning” is still a pervasive expectation of most players.

33. There are exceptions, particularly among players who judge their status by their political/social success, but most players do not follow that path.

the higher levels. This maintains the integrity of the hierarchy, underpinning the players' sense of advancement and reinforcing their growing feelings of self-actualization. A virtual world in which the lucky roll of a die could instantly turn a newbie into a mighty wizard would remove all pretence that rank meant anything. Unless the players of this world could find some other way to measure their relative progress, it would become a very disappointing and dispiriting place for those on a hero's journey. It is perceived as an issue of *fairness*.

Virtual world administrators strive to protect the integrity of the level hierarchy. If they discover that someone is exploiting some unintended design feature that fast-tracks them to higher levels, they have not only to track the bug down and fix it, but also remove all benefits that the player has gained from it.³⁴ In its purest form, this may mean reducing their character by several levels, but it can also include actions such as removing in-world property or in-world currency wrongfully acquired. The interesting question is the definition of "wrongfully acquired." Who decides it is wrongful? What makes some actions in the virtual world "exploits" when other, similar actions, are not?

Virtual worlds are designed to be open-ended. Designers are usually very pleased when they discover that their virtual world reacts sensibly to a situation which they had not foreseen. Suppose that, in making a patch, the designers of one virtual world were to improve its physics engine such that object collisions were better detected. To their delight, they discover that players can now use axes to chop down trees, whereas previously they could not. To their dismay, they discover that the Axe of Great Magic can chop down stone walls, too. Players in the possession of this rare item have been breaking into castle treasuries and availing themselves of the entire contents unmolested by guards.

In both of these examples, the effects were unintended. The chopping down of trees is something that the designers were pleased with, yet the chopping down of walls is something they were

34. Generally speaking, if a player discovers an exploit and informs the administrators without having taken advantage of it, they will be rewarded for their honesty. Unfortunately, also generally speaking, players do not tend to do this and are thus subject to the full fury of the administrators when they are found out.

not pleased with — it gave players a short-cut to wealth. The former would be regarded as a feature, the latter, an exploit. The designers would alter the virtual world's code so as to maintain the former while suppressing the latter. From an abstract point of view, though, there is little to choose between a feature (easy logs) and an exploit (easy treasure). In some virtual worlds, perhaps the chopping down of trees would be the exploit and the chopping down of walls would be the feature. It is a judgment call, and one that only the virtual world's designers are in a position to make. If they do not get to decide what is or is not an exploit, exploiters will prevail and the achievement structure will break down.

Note that not all exploits are in the code. Sometimes the exploits occur where the code cannot reach — in the real world. If a player does something in the real world that gives them an advantage that the designers deem to be unfair (e.g., they hack into the client software to reveal information to which they should not be privy), administrators should be able to take action in the virtual world to protect the level system. If this means disintegrating characters played through hacked clients, so be it.

This is the third and final point. Those virtual worlds that offer one or more explicit, sanctioned methods by which the relative experience of players may (through their characters) be judged, have an obligation to uphold the integrity of those methods. In order to do this, the administrators must have the freedom to remove what they perceive to be short-cuts and to undo the results of what they perceive to be aberrant behavior whenever these situations arise — even if they arise in the real world. As long as this design principle is respected, administrators are able to preserve the basic honesty of the measuring system. If their powers to interfere as they deem necessary were removed, then either some other way of preserving the hierarchy must be found or some other hierarchy must be implemented, or the virtual world will cease to operate as an effective venue for identity exploration.

III. DISCUSSION

To recapitulate, the three points I have made are: (i) the powers that virtual world administrators wield are embedded in the coded rules of the virtual world, which the administrators them-

selves define — if this were not the case they could not protect the game conceit; (ii) virtual world administrators have *carte blanche* to change the virtual world however they deem appropriate, regardless of the will of the players, so that the virtual world can evolve; and (iii) administrators of virtual worlds that feature achievement are able to change the coded rules of their virtual world retrospectively and without warning, under conditions they need only specify after the event, so that the virtual world can continue to support identity exploration.

The game conceit, freedom to evolve, and support of a hero's journey — without all three of these fundamental characteristics, a virtual world is greatly diminished if not mortally wounded. Although some administrators of individual worlds may be happy to relinquish one or more of these characteristics if they so choose, it is not right for any of the characteristics to be taken away through the ignorance of external forces. The three design principles described above currently protect their respective characteristics. These may not be the only ways to protect them,³⁵ but if the current principles fail then other means to achieve the same ends must be installed instead. Otherwise, virtual worlds will never deliver the wonders they promise (or, indeed, continue to deliver those wonders they can manage at present).

This paper is not intended to defend the current principles *per se*, but simply to point out what threatens them. Several emerging attitudes towards virtual worlds that, at first glance seem perfectly reasonable, upon closer inspection, are more than suspect. The most contentious of these attitudes, and hence representative of the general principles, is the commodification³⁶ of virtual worlds.

35. Indeed, these may not be the only characteristics that need protection. They are, however, the ones most likely to be affected by emerging legal arguments concerning virtual worlds.

36. *Commodification* is a term used to describe the transformation of previously non-commercial relationships into commercial relationships. In virtual worlds, this is generally taken to refer to the treatment of virtual objects (or currency or characters) as objects of real world commerce. Its principal manifestation is the buying and selling of virtual goods for real money on auction sites such as eBay.

A. *Playing by the Rules*

Although in the early days of *MUD* I foresaw many of the changes that were to come to virtual worlds, I did not predict the extent to which they would become commodified. The effect of commodification on virtual worlds is illustrated by the way it breaches the game conceit. Commodification brings reality into virtuality. Unfortunately, except in very narrow circumstances,³⁷ the game conceit evaporates upon contact with this much reality. For no other reason than this, virtual world administrators with a game conceit to protect must have the ability to extinguish the threat. There are other things they can try first (such as attempting to persuade an individual of the harm their activity does to the virtual world); of course, for those that do not co-operate, only the extinction of their characters will ultimately stop them. Administrators should be allowed to obliterate traded characters — or even characters they suspect are being manufactured for trading — merely for *existing*.

It is not hard to see whence objections to this might come. A player who pays \$5,000 for a virtual house will be absolutely livid if you, the administrator, simply disintegrate it (or even if you merely auction it off). As far as the player is concerned, you just burned \$5,000 of their money. The player does not care that you prohibit commerce; the local park prohibits commerce, but if someone bought a dog there, that would not give the park warden the right to shoot it. However, this is because the existence of a bought dog in a park does not diminish that park's ability to function as a park. The existence of a bought character in a virtual world does diminish that virtual world's ability to function as a virtual world. It is one more grain of reality, one more player who regards the virtual world as little different than the real one.

There is a familiar paradox here. All virtual objects are defined by the virtual world's code. That is not just one piece of code, but the sum of the code, along with all the data it operates on:

37. Playing poker for money involves making game-critical decisions based on foreseeable consequences occurring outside the game. (I.e., can you afford to stay with the betting?) To do this, poker temporarily co-opts part of the non-game world into its magic circle. With careful design and planning, virtual worlds can do the same kind of thing in a limited way; this does *not* in general extend to the routine buying and selling of characters on auction sites, however.

everything is so dependent on everything else that it is impossible to isolate a single few lines of program and say “these are the Spear of Destiny” or “these are the Sword of Truth.” Those same lines that “define” the Spear of Destiny *also* partly define the Sword of Truth — if the spear did not exist, the sword’s influence on the virtual world would be ever so slightly different. The code is the DNA of the virtual world, and — here the crucial bit — the administrators are part of that DNA. A judge can strike down an administrator’s powers in a virtual world, but those powers are embodied in the code. To change the powers is to modify the code; to modify the code is to modify all virtual objects — including the one that caused the judge to order that the code be modified. Put another way, a virtual object is only what it is because the designer makes it so. Take away the designer’s ability to make it so, and it ceases to be what it was.

The out-of-context sale of one object is not going to make a lot of difference in itself. It is a proverbial drop in the ocean, and its feedback into the virtual world’s value system is lost in the noise of in-context transactions. The *accumulation* of out-of-context sales, however, does make a difference. Unchecked, eventually it tips the scales and the virtual world flips from being a hero’s journey world to being a world with no hero’s journey. The game conceit has gone.

Which is the more important goal, supporting explorations of identity or supporting the free market? Are they compatible, or mutually exclusive? If those who make and interpret laws break down the barrier that is the game conceit, they are taking away the ability of virtual worlds to deliver that which only they can deliver. Is it right to do that? Is it right *not* to do that?

The scene: a regular Saturday afternoon match in the Premier League.³⁸ The referee awards a penalty. The defending goalkeeper stands in front of his goal, while the attacking striker places a ball on a spot twelve yards in front of him. The striker is going to run up to the ball and try to kick it past the goalkeeper and into the goal. The goalkeeper is going to try to prevent the ball from getting into the goal; except only this one is not, because this one has been paid by a gambling syndicate to throw the match. When the

38. This is soccer. Being English, it was either soccer or cricket.

police find out, he is going to go to prison. One goalkeeper taking a bribe is like one player selling a character. The law does protect some game conceits once it understands the consequences of not protecting them. Will it do so for virtual worlds?

B. There's One Born Every Minute

Because they evolve, virtual worlds change the whole time. If I, as a designer, determine for obscure reasons of balance to add a thousand new Swords of Shininess, that is up to me. What if you bought a Sword of Shininess yesterday for \$500 (in real world currency), though? Its value has immediately dropped, because the supply of Swords of Shininess has increased. Or perhaps for even more obscure reasons of balance I decided that the best solution was to remove Swords of Shininess as a concept altogether — you would be down the whole \$500.

A player in this situation might think it reasonable to go to a court of law to seek compensation for loss, or to get the designer's decision reversed. For whatever reason, a judge might agree with the player and award damages and/or instruct that the latest patch be reverted. This would not be a good thing for virtual worlds.

As previously described, every change to a virtual world has *some* effect that will impact one player less advantageously than another. If that player can call upon the law for compensation, so can someone else for some other change.³⁹ The overall effect is to remove the designer's freedom to change their world however they deem necessary. The result is that virtual worlds will not evolve.

Now, let's throw in that word "reasonable." Players expect that designers will patch the virtual world every so often, and they accept a certain amount of "reasonable" change. When the designer makes an "unreasonable" change, then they call in the judge. Does this fix the problem?

No, it does not. There is no way to measure the "reasonableness" of virtual world design decisions any more than there is a way to measure the "reasonableness" of a portrait. Artists do what artists do.

39. Or even, conceivably, for the change required by the judge to undo the first change?

Even if it were feasible, it is pointless. Any utility inherent in a virtual world object is only there because of the software that provides its context. When you buy a virtual object, you are gambling that the virtual world giving it meaning will not change in such a way that it reduces the amount that people will pay⁴⁰ for that object. Securing your bet by calling on the law to undo changes of which you disapprove attacks the standard that permits designers to make whatever changes they deem necessary to help the virtual world evolve. Every change affects *somebody* adversely, therefore in this scenario every change can in theory be prevented by law. Thus, the virtual world does *not* evolve, which ultimately kills it. Killing it removes the entirety of your investment anyway. In other words, if players, wishing to protect their investments in a virtual world can invoke the law to limit changes, that very action will change the virtual world in such a way that the investments will *not* retain their value.

There is a rejoinder to this. What I have effectively done in the above argument is set up an edifice only to knock it down. The law might seek to protect investments from the effects of designers' whims, but then again it might not. I could just as easily have suggested that the law might seek to make all virtual worlds have names beginning with the letter P, then demolish that argument instead. What evidence is there to suggest that players would want to bring in the law if they lost money because of a change?

Well, the evidence is that players have already tried to do this by other means. Players are subservient to designers, because designers control the code. However, players can leave the virtual world if they so choose, which gives them leverage on the developer's marketing team. The marketing team, being on the business side of the company, can call on higher management to instruct the designers to do things they do not want to do. Thus, a rock/paper/scissors relationship exists; designers beat players, players beat marketers, marketers beat designers. Unsurprisingly, there have been many occasions in the past where players have used their influence

40. What people are prepared to pay for an object depends on many factors, of which its utility is but one. Nevertheless, it *is* part of the calculation, so changing it will have *some* effect.

on marketers to cause major changes to be made to a virtual world.⁴¹

Fortunately for designers, this approach only works when large numbers of players are involved. Individuals — even rich individuals — have little influence on marketers. They do, however, have (through their lawyers) influence on judges. If their monetary loss from a change to the virtual world were great enough, there is every reason to suppose that a player or group of players might seek redress through the courts.⁴²

C. *Meaning*

Bill Gates could be the world champion high jumper if he wanted to be. All he has to do is go to the current world champion high jumper⁴³ and buy his world record off him. Once he has got it, maybe he can persuade the courts to prevent other people from attempting to beat it because that would be stealing.

Obviously, this is neither true nor possible. World records are awarded to individuals only under certain conditions. You cannot buy a world record — they are non-transferable. So are tickets to international sporting events; so are bank accounts; and so (if you want to enable the hero's journey) are characters within virtual worlds.

There are four main reasons why people buy characters in virtual worlds:

1) As an investment. They think they can sell the character or the objects that came with it for more than they paid.

2) For group-play reasons. They have not played for a while and their friends are ahead to an extent that they could not easily

41. An example of such a change was the removal of player versus player combat in *Ultima Online*.

42. See Celia Pearce, *Emergent Authorship: The Next Interactive Revolution*, 26 *COMPUTERS & GRAPHICS* 21 (Feb. 2002) (reporting that the parents of an *EverQuest* player who bought him a high-level character for his birthday tried to hold the developers accountable when he subsequently got it killed). It is not clear from her paper the extent to which lawyers became involved, however, nor whether the anecdote is basically true or merely an urban legend.

43. The current holder of the outdoor world record for the high-jump (men) is Javier Sotomayor. See Int'l Ass'n of Athletics Fed'n, available at <http://www.iaaf.org/statistics/records/gender=m/allrecords/discipline=hj/index.html> (last visited Aug. 25, 2004) (detailing statistics and records).

catch up. They buy a character of an appropriate level so they can play with their friends again.⁴⁴

3) To inflate their status. They buy a higher-level character so they can act like they are a higher-ability player.⁴⁵

4) They want an object and the only way they can get it is by paying real money to people who have tied up the market.

The first and fourth of these reasons are dependent on the other two for their success, so if those disappear then these also disappear. The second one is understandable, although ideally it should be unnecessary; virtual worlds ought to be set up so as to make mixed-ability parties of players viable. The third reason is the problematic one, because it is in direct conflict with the perception of achievement.

It is fairly obvious that paying for a higher-status character in order to appear to be a higher-status player is ultimately self-defeating. If one player buys status, those who know that player will also be tempted to do it (so as to re-establish their place in the hierarchy relative to that player). The more that players trade up their characters, the less that anybody will associate character level with player ability, and therefore the lower the value of level as a measure of ability. If too many people debase the currency, the currency becomes worthless.

This has a bad effect on players undertaking a hero's journey. What is the point in beating down hordes of bad guys, scrimping and saving gold pieces to buy the next grade of magic shield, bouncing back from your defeats, using your wits to ensure victory — what is the point of it if someone with a few dollars to spare can get where you are while knowing squat about the game?⁴⁶

44. This category also includes those who might buy a character in order to fill a perceived void in their group's make-up. For example, if a party of adventurers has one-too-many mages and one-too-few healers, the player of one of the mages may sell their mage and buy a healer.

45. This would also cover the situation where a player wants access to high-level content without having to "waste time" playing through the low-level content to get there. In this instance, however, there is a possibility that the virtual world's design is at fault; if players are being made to jump through more hoops than is necessary to progress their hero's journey, some of those hoops should perhaps be removed.

46. Players at this stage of their hero's journey will usually still regard the virtual world as a game.

As a virtual world designer, I do not want my players to have their sense of achievement trashed like this. I therefore seek to prevent players from buying and selling in the real world characters and objects from my virtual world. If I cannot protect the integrity of the measuring system, players will lose faith in it. This will cause them to abandon their hero's journey, depriving the virtual world of one of its unique selling points.

Some virtual worlds do not care about this, which is fine. Some virtual worlds do care about it, however, and they must not be treated the same way as the virtual worlds that do not care. There is a step change difference between the two. Virtual worlds are just about the only places where an average person today can undertake a hero's journey, but even without this feature they can still qualify as virtual worlds (in the same way that a story without a plot can still be a story). What is acceptable in a virtual world for which the designers have opted out of supporting the hero's journey is not necessarily acceptable in one for which they have not.

One option open to virtual world administrators wishing to stop the trade in characters and objects is to delete any character or object found to have been traded. While this may work for the sale of characters, players are generally opposed to the idea when applied to objects; as described above, many of them do not buy objects because they want an unfair advantage, they buy them because a real-life company specializing in object sales has tied up the source and this is the only way to get them. They want the sellers to be punished, not the buyers.

Thus, administrators will often close down entire accounts discovered to belong to dealers, but leave those of the people the dealers exploit untouched. Because accounts are real world entities, most commercial virtual worlds assume the authority to do this under an End User Licensing Agreement ("EULA") that defines the conditions under which a player is allowed to enter that virtual world; breach of this contract means that an account can be cancelled with no redress.

In either situation (loss of characters or loss of accounts), the sellers are not going to be happy. They are losing trade because of the administrator's actions. Sellers may seek to strike down "op-

pressive” restrictions embodied in EULAs and administrative practices.⁴⁷ Perhaps they will be successful?

I shall not go into the various legal arguments for and against the actions of virtual-object traffickers.⁴⁸ As indicated earlier, my task here is to explain why the current design principles exist and what would happen if they did not exist; it is not my place to determine whether they should or should not exist in the eyes of the law.⁴⁹

Early virtual worlds did not have the problem of people claiming real life ownership of virtual objects. The reason for this was because these worlds would periodically reset — everything was returned to its starting position, leaving only the character records of the players untouched. This was for design reasons,⁵⁰ but one consequence was that players took it for granted that everything in the virtual world was transitory — the lord giveth and the lord taketh away.⁵¹ It was only when virtual worlds began taking on more permanence that suddenly some players began to think that because their character owned something, that meant they, as a *player*, owned it.

If players are given (or if the courts decide they already have) the right to buy and sell any characters or objects they “own” in virtual worlds when this is against the wishes of the administrators and most of the other players of those worlds, that would invalidate the current principle employed by developers to protect their achievement hierarchy. Unless some other way to maintain it could

47. Although it may appear that once again I am building up an edifice just so I can bulldoze it, this one is constructed on stronger foundations. Mythic, the developer of *Dark Age of Camelot*, was sued by a virtual object trading company called Black Snow after Mythic suspended Black Snow’s accounts. Unfortunately (from our perspective) the case was never resolved because Black Snow neglected to pay its lawyers.

48. For a summary of these, see Ren Reynolds, *Hands Off MY Avatar: Issues with Claims of Virtual Property and Identity* (Sept. 2003), available at <http://www.ren-reynolds.com/downloads/HandsOffMYavatar.doc>.

49. This is not to say I would necessarily be overjoyed with whatever decision was handed down to me.

50. You can give actions far more complicated consequences if you know that their effects will all be wiped out simultaneously. Otherwise, undoing the effects of one action might interfere with the continued ability to undertake some other action (for example, the door someone burned down yesterday suddenly respawns and traps you in a dead-end room).

51. *Job* 1:21.

be found, this, in turn, would lead to a fundamental change in the nature of virtual worlds. It would be like insisting TV drama adhered to the same standards of truth as TV documentaries, thus destroying TV drama.

IV. SUMMARY

I have described three design principles of action that virtual world developers commonly employ to ensure their creations' uniqueness and survival.

In truth, these principles are not quite as formally distinct as I have made out. As an administrator, if I find you are using an exploit, then I might decide to obliterate your character using the powers I gave myself to protect the game conceit. Alternatively, I might change the virtual world so that the fruits of your exploit are worthless — using powers only “needed” to guarantee the virtual world's evolution. Then again, I may just fine you a few levels using the specific powers I possess for maintaining the integrity of the achievement system.

Everything is intertwined and hence only strengthens the need for the maintenance of all the design principles. Optimistically, this means the system is robust — if one design principle were invalidated, then others could cover for it. Pessimistically, this means the system is fragile — if one design principle were invalidated, the others would be invalidated with it.

I tend towards the pessimistic view. If one design principle is invalidated, this will be because it can do something that it should not be able to do. If another design principle can achieve the same ends, it will be invalidated for the same reason. If it cannot achieve the same ends, whatever the design principle was protecting will be unprotected and this will ultimately mean the end of virtual worlds as we know them (and, worse, as we might yet have known them).

I have nothing against commodification for virtual worlds that want it. As far as I am concerned, the more virtual worlds there are, the better; but I do not want all virtual worlds to be commodified. This may, however, happen if precedents established in dealing with the virtual worlds that want commodification are applied to the virtual worlds that do not want it. Not only is this unfair to those developers and players who do not want it, but it is self-defeat-

ing — as I have shown three times in the above discussion, uninvited commodification ultimately leads to its own strangulation.⁵²

When Roy and I created *MUD*, we knew that other people would write programs based on it — that the idea would evolve. We knew these “virtual worlds” would become commercial entities in themselves (i.e., that people would pay to play them).⁵³ After thinking about it, we figured there was scope for advertising in them, but that this would spoil the players’ feeling of immersion⁵⁴ unless it made sense in context. For the same reason, we rejected the idea of selling stuff inside the virtual world using real world money.⁵⁵ Besides, who would want to pay for something that might be worth nothing the next day?

Virtual worlds have evolved. There are myriads of them on the Internet of all shapes and sizes, from tiny, textual, role-playing MUSHes (“Multi-User Shared Hallucinations”) to mighty, all-conquering graphical spectacles with more players than some countries have citizens. Their amazing variety can only increase, as new designers with new ideas seize their own chance to make their imaginations real. Yet, through all these worlds run threads of similarity, the fundamental concepts about which they crystallized — the core characteristics that say “this is a virtual world.”

If virtual worlds are to continue to astound us, to fill us with wonder, to allow us to be who we really are, these threads of similarity must be protected — cherished, even.

They’re not games, they’re places.

And I still want to go there.

52. In some cases, invited commodification might do so, too — it depends on whether the virtual world’s EULA holds up if challenged in the courts.

53. Roy was more cautious in this regard, because although he could note empirically that people found playing *MUD* a compelling experience, he could not see why they did so. For him, writing *MUD* was fun; playing it was what he did to make sure what he had written worked.

54. I am not sure we called it “immersion” back then, but we had the basic concept of it from the very beginning.

55. We did miss a trick here, though. It is immersion-busting to buy a magic sword with dollars, but less immersion-busting to buy gold pieces with dollars and then buy the magic sword with gold pieces.