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The Line Between Play and Design

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Abstract

One of the informal properties often used to describe a new virtual world is its degree of openness. Yet what is an "open" virtual world? Does the phrase mean generally the same thing to different people? What distinguishes an open world from a less open world? Why does openness matter anyway?

The answers to these questions cast light on an important but shadowy and uneasy topic for virtual worlds: the relationship between those who construct the virtual and those who use these constructions.

Introduction

Virtual worlds are real-time, automated, persistent, shared, imaginary places you can visit through the vehicle of a character[1] [Bartle 2003].

Virtual worlds can take have many forms, and over the years a vocabulary has emerged to disambiguate between them. For example, a "game world" (such as *World of Warcraft*) is one in which gameplay is integrated into its design, whereas a "social world" (such as *Second Life*) has no such concepts built in. Similarly, a "high persistence world" (such as *EVE Online*) is one in which changes to the game world endure, whereas a "low persistence world" (such as *The Lord of the Rings Online*) soon reverts to its default state. Each of these dimensions along which virtual worlds can differ governs the way that any particular virtual world "feels" to its players.

One of the oldest such dimensions to be identified is that of *openness*. The reason it was recognised is because even in the early days of virtual world development, different designers had different ideas about what a virtual world should be[2]. After two decades, the debate has led to a dialectic that can be summarised as follows:

1)	*Structured* worlds are those in which players adopt predefined roles to pursue (usually) quest-led narratives.
2)	*Sandbox* worlds are those that leave players free to do pretty much whatever they like.

Sandbox worlds are open; structured worlds are less open[3]. "Openness" here means having the freedom to walk your own path; the dialectic concerns whether or not this freedom is "fun".

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[1] These days, characters are often referred to as *avatars*, although strictly speaking an avatar is the graphical representation of a character, not the character itself.
[2] In particular, the first virtual world, *MUD*, was designed to be very open, but several of the virtual worlds that immediately descended from it were consciously made less open.
[3] All virtual worlds are open to some degree; the issue is to what degree, not whether they should be open at all.

When a designer says that a virtual world is open[4], this is what they mean. However, designers are not the only people to use the term – players use it, too. Interestingly, although some players do use the word in the same way as designers, others use it for a concept which, on the face of it, is completely different: one virtual world is more "open" than another if more groups of people are able to modify the former than the latter. This usage is akin to that in the term "open source" – it means open access. The word designers use for this is *impact*, which is formally a sliding scale; as we shall shortly see, however, players tend to use "open" purely as a binary proposition.

There is a relationship between impact and persistence [Koster, 2001]. In essence, the more users that are able to modify a virtual world, the greater its persistence will be. This in turn has implications for the *extent* of the virtual world's software (*ie*. how much of it is hard-coded and how much of it is scripted[5]): high impact means low extent (only basic functionality is hard-coded) whereas low impact means high extent (almost all functionality is hard-coded). Thus, a virtual world such as *Second Life* which has high player impact must in turn have greater persistence and therefore low extent: much of its functionality lies in code scripted by its players. Conversely, *World of Warcraft* has low player impact and therefore low persistence, and so high extent: much of its functionality is coded directly by its programmers.

On Content

If we are to explore the relationship between these two different kinds of "openness", we must first pin down what is meant by "change" or "modify" in the context of a virtual world. This suggests that we should begin by considering what it is that is being changed or modified: *content*.

Content is that which, if virtual world players are regarded as consumers, they consume. So, in a generic Fantasy game world such as *Age of Conan*, it means the geography, the quests, the objects, the non-player characters, the buildings – all that makes one play experience different to another. In contrast, things which don't vary a great deal between experiences – such as the combat rules or the inventory mechanism – constitute the virtual world's *physics*.

For a large-scale game world, content creation is usually the job of one or more designers[6]. However, this is not the only way to create content: if players are given the right tools, then they can create content, too. This idea of having *user-created content* is not new, having first come to prominence

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[4] Note that there is another use of the term in development: an *open beta* is an extended period of play-testing when a new virtual world close to being ready for release invites all-comers to try it out; a *closed beta* is one in which only a select group of individuals is allowed to try it. The difference between this kind of "open" and the structured *versus* sandbox kind is almost always apparent from the context.

[5] Script and code are both software. The difference is that code is compiled into a form that can be executed directly (and thus very swiftly) by a computer's hardware, and it cannot therefore be changed dynamically. Script is data which can be interpreted by software (*ie*. code or another script) as instructions to execute. It is therefore possible to modify scripts on the fly. Scripts execute much more slowly than code, because they're executed in software which itself is ultimately executed in hardware.

[6] These are usually referred to as "level designers", which is how content designers are styled in the wider game industry.

around 1990 when a schism among players of text MUDs led to the game/social divide we see today. The motivation back then was ideological: game worlds celebrated destruction, so social worlds should celebrate construction. In recent years, however, the concept has been re-examined for an entirely different reason: content-creation is hugely expensive, but when users create their own content then it comes practically for free. Also, because there are many users, it can be generated in large volumes. At a time when commercial virtual worlds cost tens of millions of dollars to develop, it is therefore perhaps unsurprising that user-created content is looking an increasingly attractive proposal.

Of course, all virtual worlds have user-created content of a kind, because interactions between players naturally and continually generate new experiences for those involved. This is taken for granted as an implied effect of the virtual world paradigm, however, and so isn't what is normally meant by the term. Rather, content is said to be "user-generated" if it is constructed consequent on the virtual world's physics and is integrated into existing content. This is why it tends to be persistent: there would be little appeal (either to players or developers) in the creation of new content if it were merely transient in nature.

On Changing Content

So, user-created content arises when the players of a virtual world make long-term changes to that virtual world. Now although there is a broad spectrum of possible changes that could in theory be made, in practice they can be divided into two categories: *contextual* and *freeform*. The distinction between these is of crucial importance in considering what "openness" means.

Suppose that in a Fantasy game world, you want to build a castle in a particular location. No other instantiation[7] of the game world has a castle in this location, and castles are fairly durable; this would therefore be a simple example of user-created content. You would proceed by paying a non-player character architect to produce a plan, hiring a bunch of masons, carpenters and general labourers to turn the plan into a building, then furnishing it with equipment and decorations and staffing it with servants and soldiers.

The above is an example of an in-context, or contextual change. Everything you did was allowed for and made sense within the fiction of the game world: all the changes being made were consistent with the conceit that the virtual world is real. Other examples include killing monsters, making cloaks and locking doors: all are changes to the virtual world (although their persistence may vary), yet all make sense within the context of the virtual world.

Now suppose that you are in a Fantasy game world and you decide that you want to make your pet succubus a gown that looks like one you saw at last night's Oscars ceremony. Or perhaps you want your avatar to have an anime top half and a photo-realistic bottom half? Neither of these modifications

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[7] The same virtual world software running on different computers can lead to different virtual worlds, in the same way that no two games of *Monopoly* are quite the same despite their having the same rules and pieces. Formally, these individual copies of a virtual world are known as *instantiations* or *incarnations*, but most players know them as *servers* or *shards*.

would make any sense within the context of the virtual world – they're entirely freeform.

It's always possible, of course, to add new freeform content that does fit the game world's fiction – you can still build a castle in a freeform world, there's no rule that you have to make something off the wall. This is, in fact, what designers do: indeed, it's what defines the fiction. However, the more people who are able to make changes in a freeform fashion, then the less likely it is that maintaining the fiction is going to be sustainable. As a result, most virtual worlds that allow user-generated freeform content do not attempt to maintain any kind of magic circle [Huizinga, 1938], and therefore aren't properly considered to be games.

It's worth noting that even contextual changes can be subverted by sufficiently imaginative players. In 2007, for example, in an effort to get round *World of Warcraft*'s ban on advertising gold farmers' web sites, the URL of one such site was neatly spelled out in a prominent position using the bodies of dead level 1 gnomes [Taylor, 2007]. However, on the whole the assaults on a game world's integrity are far less serious if whatever user-generated content it has comes from a contextual direction, rather than a freeform one.

On Design

When a designer designs a virtual world, the available options regarding user-created content are, in general terms:
1)   No user-generated content. Players can kill monsters, but these respawn 10 minutes later and the *status quo* prevails.
2)   Contextual user-generated content. Players can build a dam and submerge the caves where the monsters live – those ogres are never coming back!
3)   Freeform user-generated content. Just delete the monsters and their caves, and put a lap-dancing club there instead.

The first two of these have a similar philosophy, and the choice of which one to adopt is basically implementational. In both cases, the designer is restricting the player's ability to make changes to the world's content, but covenants that the result will be fun or otherwise of potential benefit to players. For the third option, though, the emphasis is on the players: they are trusted not to abuse the powers that the designer has left for them.

In the first two cases, the designer is creating a framework for *action*; in the third case, the framework is one of *design*. As we shall shortly see, this leads to an interesting recursion.

In the virtual world *Second Life*, players have a freeform ability to change the world. They can add whatever they want, provided that the *Second Life* physics engine supports it. So although you could build a police box, you couldn't build a TARDIS[8] (which is bigger inside than outside) – and even if you could, you couldn't thereupon put the TARDIS inside itself. Nevertheless, the ability to make changes to *Second Life* enjoyed by its players is considerable.

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[8] If you honestly don't know what a TARDIS is, shame on you! Go and watch the latest series of *Dr Who* immediately!

In fact, *Second Life* places sufficient creative power into players' hands that they can implement their own virtual worlds entirely within *Second Life*. Such worlds do exist, a prominent example being *City of Lost Angels*. It would be possible, given sufficient development funds, to create a stand-alone *City of Lost Angels* outside of *Second Life* – it isn't irrevocably intertwined with *Second Life*, that's just its current platform. Likewise, it would be possible (in theory at least) to re-implement a stand-alone virtual world such as *EverQuest* within *Second Life*, at least if they both had compatible physics. It's therefore clear that *bona fide* virtual worlds can be created within existing virtual worlds, given that the "host" world is freeform[9].

So, could *Second Life* be implemented within *Second Life*?

Well the physics could be, yes, but not all the content (because that would include the simulation itself and lead to an indefinite recursion). However, the point remains that some freeform virtual world (not necessarily *Second Life*) could be created as a sub-world within *Second Life* just as readily as a contextual world (such as *City of Lost Angels*) could. This might be something someone would want to do if they had developed better object-creation tools than *Second Life*'s built-in ones, for example. So such a freeform sub-world is possible.

There would then arise the question of what people who used this sub-world would do in it. Well, they could create a contextual world, or a freeform world; if they made a contextual world, that would be the end of the line, but if they made a freeform world then we get to ask the question again – and again, and again, until someone makes a contextual sub-...-sub world. This is an entirely different recursion, and a much more interesting one from the point of view of virtual world design.

It's not just complete virtual worlds that this applies to, either, but any virtual content. If I were to build a hat in *Second Life*, I have used *Second Life* as a hat-creation tool. If I were to design several hats and find that I kept doing the same thing over and over again, I might build my own specialised hat-creation tool that cuts out all the boring parts. I set it up, press the button, and out pops the hat I specified on the front panel. I can sell my hat-making machine to someone else who wants a hat-making machine. I may even have originally obtained my hat-making machine from someone who had developed a machine for manufacturing object-manufacturing machines. If I tire of hat-making machines and just make hats manually, I could still be involved in a further manufacturing process: a buyer of my hat could wear it (its intended use), but they might decide to employ it as a component for a decorative teddy bear and sell that as a finished good.

I'm using *Second Life* as an example here, but the same applies to all freeform worlds.

Here's the thing: wherever in the chain a designer is, they always have the same choice: is what I make contextual or freeform? If they choose contextual, the chain ends there; if they choose freeform, then the designer who uses what they created has to face the same decision.

I'm a designer, about to make a virtual world: it can be freeform or contextual. If it's contextual, the players are using it as an end product; this would be *Warhammer Online* or *EVE Online* or *Dark Age of Camelot*. If it's freeform, the players are using it as a design tool; this would be *Second Life* or

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[9] Or contextual, where virtual world creation is part of the context…

There or *HiPiHi*. Someone creating within a freeform world has the same decision to make: contextual or freeform? Contextual would be *City of Lost Angels*, freeform would be a land parcel that has been landscaped for resale. Someone buying the land parcel could use it for building a house, or for building a role-playing game. The choices remain the same: are you creating an end product, or are you creating something that enables the creation of an end product?

Put another way, are you making art, or the means by which someone else can make art (which itself could be an art)?

Conclusion

When a designer calls a virtual world "open", it means that this world is one in which the players have relatively unfettered opportunities to conduct in-context actions. When a player calls a virtual world "open", it means that this world is one in which the players get to be designers. These concept are not, therefore, mutually exclusive; indeed, freeform social worlds are almost certain to be open in both senses of the word.

In the past, some players of social worlds with a lot of user-created content have shown contempt for the designers of game worlds because of the restrictions they place on their players' actions. *Second Life* is seen as a far freer environment than *World of Warcraft*. In *World of Warcraft*, you play what someone else has created; in *Second Life*, you can create things for yourself. Following the analysis presented here, however, this is a dangerous opinion to have: criticising a contextual world for being contextual means that you fall victim to your own criticism unless the objects you make are not contextual. Essentially, why is it not OK to make a virtual world that people can only change in context, but it is OK to make hoochie hair that people can only change in context? Eventually, someone has to make something that people can just use as intended, or there's no end to it.

The line between designers and players is not a line, but a link. I design for you, you design for her, she designs for him, he uses. Sometimes the chain is short, and sometimes it's long. What's important is what lies at the end.

Whatever the virtual world, someone, eventually, must have fun from just *playing*.

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