Virtual Worlds

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Citation:
Miah, A. & Jones, J. (2011) Virtual Worlds, in Barnett, G. Encyclopedia of Social Networks. SAGE.

The term “Virtual World” is commonly used to describe the spaces inhabited by people in computer mediated environments, within which it is possible to interact with objects and others via text, audio, computer generated images, or film. Its origins can be found in literary fiction such as William Gibson’s novel *Neuromancer* (1984) where ‘cyberspace’ is imagined as:

> a consensual hallucination experienced daily by billions of legitimate operators. . . A graphic representation of data abstracted from the bank of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights receding (Gibson, 1984: 67)

Gibson’s vision of virtual worlds has been articulated in various forms, from the futuristic film *The Lawnmower Man* (1992) and *The Matrix* (1999) to *Avatar* (2009). Each of these visions focuses on the enhanced social networking between people that is achieved via digital technology. Often, this interaction occurs via an ‘avatar’, which broadly describes a device that is used to represent the identity of the user, whether or not this identity has any real-world resemblance. The possibility of creating one’s identity online has led to considerable amounts of research focusing on how identity is made manifest in virtual worlds and what this might reveal about people.

Historical Context

The history of digitally mediated worlds now spans over three decades, though the principles of virtual interactivity are rooted in other, more long-standing social technologies, such as books, film, music and so on. To this end, the idea of living in a virtual world may be understood figuratively, where the human capacity to negotiate space as a psychological apparatus, rather than a physical reality, has been a feature of human experience for centuries. From the science of dreams to ancient Greek mythology, the concept of virtuality may be applied to a far wider range of lived experiences than just computer mediated communities. Indeed, one may consider digital virtual worlds as an extension of these other, older forms.

Nevertheless, the term *virtual world* has modern currency in the context of computer environments and draws attention to our social experiences that take place outside of physical environments. Indeed, so varied have these experiences become that, over the last twenty years, it has become necessary to distinguish between different eras within the computer revolution. Each of these eras demarcates varying degrees to which the world has been affected by computer culture. This impact is made most explicit in Mainzer (1998) who argues that the developed, industrial world exists within the second or maybe the third computer age, where it has moved away from the inanimate processors that

described the calculating machines of previous decades, to a much more interactive computer experience, where machines learn, become life-like, and perhaps, autonomous (Kelly, 1994).

Over ten years since Mainzer, the commercialization of virtual worlds has become a global phenomenon, used as widely in underdeveloped countries, as they are in postindustrial societies. Indeed, while still limited claims might be made about the most advanced uses of digital technology, the growth in terms of worldwide penetration continues to build. Notably, in 2008, Internet access in China outstripped that of the USA, the leader until that point. With over 500 million mobile phone users in China, many of whom will have internet ready devices, this number is also growing quickly.

Early examples of virtual worlds included chat-rooms, or immersive worlds (referred to as Multi User Dungeons), which brought about a fundamental shift in how people created and experienced human communication (Haraway, 1985; Turkle, 1995). Such environments reinforced the claim that humanity was entering a postmodern era, where identity is fragmented and where grand narratives about such constructs as the family, generational boundaries or sexuality, for example, are disrupted (Rojek, 1995). Simple examples of such disruption is the increased number of communities to which someone may belong, which far outstrips the way membership to a community operates in a pre-virtual world. In other words, virtual worlds have permitted people to escape from the values and constraints of lived, physical culture, both in terms of its commodification and its conventions (Rojek, 1993). To this end, computer culture can be seen as an empancipatory device, through which one can go anywhere and do anything.

Second wave cybercultural theorists have criticized these stories about virtual worlds by drawing attention to the lack of evidence to support the claims that they allow us to transcend physical world boundaries. Alternatively, others have raised questions about the credibility of claims that social networks can be constituted by such diverse and widespread communities. For example, Rob Dunbar claims that people can, at best, maintain meaningful human relations with up to 148 people, beyond which it becomes harder to claim that the relationship has any significance in the person's life. So, as some users build so-called 'friend' connections with over 5,000 people in social networking platforms like Facebook, Dunbar's number brings into question the meaningfulness of such associations. Alternatively, the idea that virtual worlds are devoid of the burden of physicality is easily dismissed when studying the communicative grammar of virtual world interactions. For example, it is common for people chatting to strangers in virtual worlds to start a conversation with 'asl?', asking for the *age*, *sex* and *location* of the person. Such language reinforces the idea that place and space still matter online, which leads to a further focal point for research – that of how people negotiate *anonymity*.

Anonymity had been a guiding principle of virtual world interactions for many years, where the nature of the experience was such that users did not need to reveal their identity unless they wished. In the early years, virtual worlds were wholly reliant on text, until graphical interfaces were developed in the mid 1990s. To this end, identity deception was very straightforward. Only in recent years, with the rise of *social media*, has there been a return to heightened visibility of identity in cyberspace, where people are both, required to and prefer to reveal as much about their offline identities as possible. Thus, such web platforms as Flickr (a photo sharing environment) and YouTube (a film sharing environment) have transformed how people play with identity in virtual worlds.

As such, the claim that virtual worlds permit users to transcend historically bounded

concepts of identity – such as nationality, gender and race – is considered by Vincent Mosco to be a myth. Mosco reinforces Roland Barthes's concept of historical inoculation, the admission in which a little caution can be used to protect the self from a substantial attack. In relation to cyberspace and virtual worlds, Mosco argues that people attempt to transcend the limitations of their present-day communication technologies and, instead, favour the ability to ignore them whilst believing that cyberspace is providing a rupture in history, a move towards virtual transcendence.

In contrast, one of the strongest advocates of the emancipatory potential of cyberspace is Howard Rheingold who considers how virtual worlds have made possible new kinds of human experiences. Researchers like Rheinghold have described virtual realities as spaces of boundless freedom, which transcends human subjectivity and where identity becomes no longer burdened by the prejudices of physical difference. In the case of virtual worlds, Rheingold refers to virtual communities, defining them as a product of social aggregation, based on the personal relationships formed within cyberspace. The relevance of the aggregated social content is not important, as the virtual community can only exist if relationships are considered meaningful. In other words, the virtual world only exists if its participants so desire it and this gives it a special, spatial status.

To this end, the idea that virtual worlds are less valuable or simpler than physical worlds is rejected in favour of the claim that life in virtual worlds has become inextricable from life offline. To this end, the separation of virtual and physical worlds is becoming increasingly meaningless, as we begin to live in pervasive, mobile worlds. To this end, discussions about the 'realness' of virtual worlds have also become increasingly redundant. Instead, attention became focused on regulation and authentication, which remains a pressing concern within cyberspace. Anxieties about authentication become apparent in cases where virtual environments give rise to new controversies. For example, in 1999 the world was confronted with the commodification of human reproduction through the enterprise named 'Ron's Angels' (see Miah & Rich, 2008). The initiative entailed the auctioning of male sperm and female ova, in an attempt to allow prospective parents to select the ideal genes for their children, rather than having to select the ideal partner. The web-based enterprise attracted a significant amount of attention from academic researchers and various fertility groups around the world condemned the practice. Yet, it slowly transpired that Ron Harris, the man behind the website was involved with the pornographic film industry and that many – if not all – of the donors were participants within these films. This brought into question the legitimacy of the egg and sperm auctioning organization, but not before the world's media had reported on the website. Over the last 10 years, various measures of authentication have emerged, from the reputation based peer review of such sites as eBay, where individual buyers and sellers would make a public note of their experience of another user, to the Wikipedia style of debating contested entries.

One of the overarching concerns about virtual world studies is the tendency of media and politicians to make overly generalized claims about their social impact. There are many different cultures of virtual world experiences, which make for a diverse digital population and range of experiences. Often, the differences between these experiences are not acknowledged by media reporting on their character, which – since its inception – have focused on the detrimental consequences of life in virtual worlds. Yet, examples of virtual communities can be seen all around the Internet, from discussion boards on niche topics such as parenting, music, and television, to the teams on online gaming platforms such as World of Warcraft, formed in order to complete challenges and improve the computer game-play experience. The demographic characteristics of these populations have also changed progressively, from a culture dominated by young males, to an inter-generational

population, with an increasingly similar gender split. Even within specific categories of virtual world experiences, populations differ. For example, within computer game culture, the World of Warcraft online gamer, who collaborate with other game players around the world to carry out quests is considerably different from the Dance Dance Revolution game population, a game that involves trying to act out physical dance steps in time with music.

The Future of Virtual Worlds

The development of virtual worlds involves both technological and social processes. Thus, without user competence maturation, technological progress is unlikely to occur. This simple observation – that people surpass technology – draws attention to a more complex proposition that what distinguishes virtual worlds is their amplification of sociability. Thus, virtual worlds must be seen as a parameter of social interaction in physical worlds and the task of developing virtual realities is of creating seamless experiences, where the most effective virtual experiences are those that most closely approximate the level of intimacy that can be achieve among people in physical worlds. Yet, the story of virtual worlds is not wholly of technological progress, or even user demands for better, more dynamic experiences. Rather, there is a considerable amount of nostalgia that now forms part of virtual world experiences. Generations of people that grew up playing computer games now seek to relive these periods, in the same way that they may watch old films or re-read books. Consequently, although the technology of virtual worlds is improving and, as a result, is offering new and alternative ways for us to connect online, the existing platforms do not always vanish with their predecessors. Instead, they appeal to the similar goals of promoting interaction between users and online identity representation.

Prominent examples of virtual worlds include *Second Life*, a self-defined virtual world, harbouring over 18 million registered accounts, and text-based chat, experimental or otherwise, still happens more than ever (although now it is possible to add multimedia elements to the discussion through audio and video conferencing software, such as Skype and MSN Live Messenger). For example, Second Life also provides further evidence of the cyclical nature of virtual world development. In 2007, reports arose about the rape of a character within Second Life, mimicking the story from one decade earlier when a text-based rape took place in the online chat-based game LambdaMOO (Mackinnon 1997).

Looking ahead, the concept of Web 2.0 has used to characterize the Internet's second form – putting paid to all previous attempts to distinguish Internet eras. Web 2.0 is characterized by open source culture where users can build their own software and the rise of social networking media – or social media. With the advent of improved mobile technology, from wireless internet (wifi), "smart" mobile phones with stronger phone signals which carry data (3G) and small laptops (netbooks), the ways in which people are interacting with the Internet is shifting once again. Tools such as global positioning systems (GPS), which allow the user to add the details of their location while they share information, opens up possibilities for *locative media* to emerge. Furthermore, the ease in which people can participate in multimedia dialogue using mobile devices, allows for networks of communities to continuously engage with the virtual worlds in which they inhabit, without being bound to the restraints of a desktop computer terminal.

The close links between geography focused communication tools and the increased application of the digital world onto the physical one has lead to the creation of devices that can layer and recognise information relevant to both. An example of this is augmented

reality (AR), a device which utilizes a mobile phone's camera to reveal details about the world. Thus, when AR is enabled on a mobile device, the user can point their phone's camera at a place in the physical world and be shown layers of information that are relevant to that location. For example, if a tourist is visiting the Eiffel Tower in Paris, she could point her mobile phone at the tower and, on the screen of the phone, would appear information about the Tower's history and so on. This relatively new technology uses mapping software, which the phone has associated with its geographical position (via GPS) to provide real-time guides to real-world places. The range of uses to which this may be put are just beginning to emerge, but range from providing information about local amenities, travel information, or to other people, who are using similar services. Social media platforms such as Twitter and photo sharing website, Flickr, are already adding GPS details (metadata) to the content that people create, so that AR can be used across a range of populated locations. From this, the growing virtual world concept is already beginning to show clear possibilities of being able to link between the digital world and the physical world.

Conclusion

In conclusion, human presence in virtual worlds can take a variety of forms. Shields (1996) notes that our focus should not be on the literal interpretation of the user's avatar, but instead be the movement of information present within the virtual space. Described as "the flow", the notion of virtuality begins in the body of one person and is mediated through the others who witness the dialogue placed into their presence. Consequently, the final environment is constructed through multiple strains of interlocking conversations, where all users control the final collective product. With this in mind, social networking websites such as Facebook and Twitter, although not immediately recognisable as a traditionally defined virtual worlds, possess characteristics which suggest that the users are engaging with the environment much in this way. The technology is constituted by an online environment, which exist for users to connect and converse with their social network, while also contributing to a digital representation of themselves. These circumstances describe what Castells describes as a 'network society', where "you are what you say you are."

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