## The Majestic Game, Interactive Media Environments, and a New Turing Test: Blurring the Boundaries Between Virtual and Real

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In July 2001, Electronic Arts launched Majestic, an Internet based game of fictional conspiracy, which used communication media to blur the boundaries between virtual and real environments. Jonathan Steuer defines virtual reality as "a real or simulated environment in which a perceiver experiences telepresence." Presence and telepresence are terms that, according to Steuer, "refer to the sense of being in an environment, generated by natural or mediated means, respectively." Majestic was pulled from the market after 9/11 because of concerns that the game's ability to create an experience of telepresence by contacting players through various media might cause some players to confuse the game with actual terrorist activity. Fears over Majestic illustrate our anxiety over potential encroachment of virtual environments upon "real" environments, has already taken place in mass communication technologies that further the practical juxtaposition of presence and telepresence.

In July 2001, Electronic Arts, a computer gaming company, launched Majestic, a game of fictional conspiracy, which used non-virtual communication media to blur the boundaries between virtual and real environments. Bearing the market tagline "The Game that Plays You," the Majestic game involved its players in an evolving mystery by contacting them through various forms of communication, including telephone, fax machine, beeper, and e-mail. This Internet based computer game was pulled from the market following the World Trade Center disaster on September 11, 2001 because of concerns that the game's ability to contact the players through various real media environments might be confused with actual terrorist activity. The demise of Majestic reflects the familiar idea that anxiety over media and their content increases in times of crisis.

The creators of Majestic were aware that the game would be controversial. Before the game was launched, Joe Keene, the chief operating officer for Electronic Arts (EA.com), described the intent of Majestic by comparing the game with Orson Welles' October 30, 1938 RCA broadcast

## of War of the Worlds.

When playing Majestic, certainly there are times when it's obvious you're in a computer game. But because the game can strike anytime, anywhere, through any device, sometimes it's not so obvious. Some test users found Majestic disconcerting. ... It's a fine line. We're after the *War of the Worlds* kind of thing. We expect some similar reaction (Maney, 2001).

The similar audience reaction to which Keene referred was, presumably, the combination of paranoia and panic that gave the Orson Welles 1938 RCA broadcast of *War of the Worlds* its fame and notoriety as a media event. Ironically, it was the fear that the terrorist attacks of September 11, 2001, would cause players of Majestic to experience "the *War of the Worlds* kind of thing" that ultimately caused EA to pull the game from the market.

The public's response to any particular media event is overdetermined by an array of different contextual factors. Reaction to Welles' broadcast may have been influenced by anxieties over the war in Europe at the time, when listeners in radio's Golden Age were becoming accustomed to hearing news "break-ins" interrupt their programs. Similarly, during the McCarthy era, films such as Don Siegel's 1956 film *Invasion of the Body Snatchers* have been seen to reflect the Red Scare fear of communist assimilation (Lovell). Currently, our nation is experiencing fears over the "clear and present danger" of terrorist attacks. The fears and anxieties of culture extend to the media of the day, which now include the Internet.

One of the points that often get overlooked in discussion of the 1938 *War of the Worlds* broadcast is that Orson Welles announced the disclaimer, "This is purely a fictional play," at four separate times during the show (Grover's Mill, 2000). The fact that some members of the listening audience still reacted with panic indicates that attempts to safeguard against improper

audience response are not always successful. Regarding the responsibility that the creators of Majestic had to their audience, Neil Young, Vice President of Electric Arts and Majestic's creator, said that:

We really tried to act very responsibly. We try to put as many safeguards into the experience as possible. And we ask our users to act responsibly and legally. In the event they don't, they're removed from the game. And if they act illegally, we'll pursue it with the proper authorities (Becker, 2001).

Given the multi-media fashion in which the game functioned, however, the potential for confusion between what was part of Majestic and what was not is easy to appreciate. One reviewer of the game wrote:

Obviously, if you thought *The Blair Witch Project* was real, you should stay far away from a real-time online game that you can't turn off. The goal of Majestic is to completely blur the lines between fantasy and reality. When a character tells you in a chat that he'll see you on Friday, they mean it—stay by the phone. As you scour the web for information, you'll find the game's crackpot Web sites are indistinguishable from real crackpot Web sites, right down to shadow companies on the domain registration info. Instant messages from the game's A.I. characters unfold just like those with live characters, capable of intelligent Q&A. Was that part of the game? You may never know—and the paranoia is the point (Elektro, 2000).

In the particular case of Majestic, in which a player could be telephoned at any time of the day or night by a fictional murderer, the anxiety is understandable. Yet the cancellation of Majestic, no matter how justifiable it may be, reflects a much more subtle social irony. The

confusion between virtual and real environments, and between virtual and real experiences, already exists in the development and use of mass communication media. For the most part, the confusion was recognized and feared only in its fictional manifestation, in the form of Majestic, which was developed after the boundaries between real and virtual had been blurred by existing communication technology. The demise of Majestic as an interactive role-playing game disseminated over the Internet illustrates a particular concern that one day, virtual and nonvirtual environments may become indistinguishable.

The on-going development of interactive relationships between human beings and computers is a characteristic of late twentieth and early twenty-first century media ecology. Alan Turing, working to create ways to use computers to break the codes of Germany's Enigma Machine during World War II, formulated his now famous test of artificial intelligence: "It is proposed that a machine may be deemed intelligent, if it can act in such a manner that a human cannot distinguish the machine from another human merely by asking questions via a mechanical link" (Turing, 1950). As technology advances, the level of realism offered by cyberspace in the execution of on-line interactive role-playing games will come ever closer to challenging Turing's Test.

Majestic was constructed by using existing communication technology in a convergent manner via an Internet server that connected with its players' real communication devices. Marshall McLuhan might have described the game as a convergence of "hot" media, the imaginations of several players deductively filling in the blanks in order to solve the mystery (McLuhan, 1964). The fact that an actual terrorist attack occurred while the game was active, meant that confusion between virtual and real environments might have disastrous consequences. The confusion between the game and reality could indicate a very unfortunate passing of the Turing Test by the game's computer generated Internet Service Provider. An article in the on-line magazine *Geartest.com* described the situation:

Majestic uses telephone calls, e-mail, fax machines, and instant messaging to place the player in the middle of a vast government conspiracy. Some of the telephone calls include desperate characters screaming or calling for help. Many of the people trapped in the doomed aircraft or the burning World Trade Center towers reportedly telephoned and e-mailed friends and relatives, pleading for help and asking to be rescued. After the World Trade Center collapse, people reported receiving mobile telephone calls from survivors trapped in the rubble

(Geartest.com, 2001).

Vast government conspiracies are not an isolated fear. UFO activists have long claimed that the government is suppressing facts concerning aliens. In fact, it is from the Roswell alien incident's alleged government group that the Majestic game takes its name. The government group, referred to as Majestic-12, is said to have covered up the entire Roswell alien incident as some kind of government conspiracy. Majestic incorporates within its play the human paranoid tendency to recognize conspiracy. EA's Neil Young commented about the appeal of the game for conspiracy theorists.

I think the vast majority of people are able to differentiate between fantasy and reality. What Majestic has is a really novel way for the story to connect with you. Once you've gone past the novelty of that...it's more about being engaged at the center of the story than fooling you into thinking this is real. If a player calling up and threatening you were the only element the game had, that would grow stale very quickly (Becker, 2001).

The virtual environment of Majestic encroaches upon the non-virtual environment in its use of non-virtual tools of communication, such as telephones, beepers, answering machines, and faxes, while drawing them into the context of a virtually constructed situation. The tools themselves still function in the same way as before, but both the content and the context of their mediation are changed by the participant's inclusion within the virtual world of the game. Thus, the significance of the mediation process itself changes as well. The process of mediation yields a "virtual" rather than a "real" content and interactivity. The telephone is still used to mediate verbal communication, yet it is communication across environments from the real to the virtual. Young describes the purpose of the game:

What we're trying to do with "Majestic" is put the player at the center of their very own suspense thriller. So we use the Internet and devices that are connected to the Internet to put you at the heart of an evolving mystery, where you've stumbled into a conspiracy that slowly begins to infiltrate your life through all these different mechanisms. The game will call you on the phone, send you faxes, instant message you and send you e-mails, and use all those different devices to make you feel you're implicated in this story (Becker, 2001).

The significance of the virtual interactivity of Majestic is ambiguous. It is one thing to interact between virtual and non-virtual worlds in a well-defined, clearly demarcated situation – a situation where, at any given point, the participant knows where one environment ends and another begins and also knows in which environment they happen to be participating at the time. It is quite another thing to interact in a situation where the ability of the participant to discern between virtual and non-virtual environments is lost. It is still a third thing to have the demarcation between virtual and non-virtual environments eradicated altogether. We are now barely beginning to be able to explore the ramifications of the eradicated demarcation in the context of mass mediated cyberspace.

Back in 1938, diverse audience reaction to Orson Welles' RCA broadcast of *War of the Worlds* resulted in the Cantril Study. The study, conducted by Hadley Cantril at Princeton University, disproved the Magic Bullet Theory, the dominant theory of the day, in which consumers of were thought to respond to media stimuli in a unified, consistent, predictable, and controllable manner. The Cantril Study concluded that consumers reacted to media stimuli based upon a variety of existing individual and socio-psychological factors, and that, very often, people sought the opinions of those around them before acting upon information presented by the media (Biagi, 2001, p. 270). This phenomenon became known as the Two-Step Flow theory.

Cyberspace offers the consumer a different challenge than do the traditional forms of mass media, such as the TV and radio, the media of Welles' day, because of the interactive component. Cyberspace challenges the consumer, the user, to act in an appropriate way in response to interactive media stimuli environments while discerning what is real from what is not. The creators of Majestic incorporated this challenge into the game, allowing it to enhance the games conspiratorial theme. The Cantril Study did not cover interactive media environments, a fact which is not surprising given the formation of the studies in 1938. Turing's work on artificial intelligence, twelve years later, is both quasi-contemporary to the Cantril Study, and an early inquiry into the current problem of consumer discernment of mediated situations. A worthy research project would be to conduct a contemporary quantitative analysis of consumer response to interactive media incorporating the hypotheses of Cantril and Turing.

It is uncertain whether the development of interactive media, media whose real-time content changes in response to human feedback, will bring us closer to the successful completion of artificial intelligence that the Turing Test seeks. However, blurring the distinctions between human and computer does not seem to be the driving force with today's media technologists that it appears to be for science fiction writers. The version of the Turing Test that seems to be most in vogue currently, at least with popular consumer culture, involves the re-presentation and integration of real and simulated environments wherein human interaction and communication, simulated or otherwise, can occur.

This being the case, words like environment, system, virtual, interactive, and media must be thought of as interdisciplinary. Moreover, much confusion results if analysis does not define clearly which discipline, which epistemology, is being used to situate the word. However, the interdisciplinary ambiguity of these words enables the theorist to illuminate new associations, and enables the practitioner, if the two are distinct, to enjoy new options and orientations in which to situate his or her field of practice. Thus, theories evolve, and fields expand. Yet it is becoming increasingly difficult to find a satisfying, all-encompassing definition for the word "environment" now that various forms of computer and cyber-oriented technology have been introduced into and accepted by our culture. The word "environment" has long had an array of prefixes and qualifiers, each of which alters the application of the word, such as virtual environment, learning environment, gaming environment, and academic environment. The word "environment" also retains a basic definitional common ground toward which all of its prefixes and qualifiers point. Hence, "environment" is the world in which the agent operates.

Also, since the term "virtual reality" is both ambiguous and contested, there may be some who reject the use of this term to describe Majestic. Majestic does not offer the "gloves 'n' goggles" type of immersion that many technologically based definitions of the term favor. Therefore, a fundamental debate in analytical treatments of virtual reality exists between a technological orientation and a humanistic orientation.

Jonathan Steuer describes a common approach to defining virtual reality, observing that "The definition of virtual reality is based upon concepts of 'presence' and 'telepresence,' which refer to the sense of being in an environment, generated by natural or mediated means, respectively" (Steuer, 1993, p.1). Steuer continues:

The [conventional] focus of virtual reality is ... technological, rather than experiential; the locus of virtual reality is a collection of machines. Such a concept is useful to producers of VR-related hardware. However, for communication researchers ... a device driven definition of virtual reality is unacceptable: It fails to provide any insight into the processes or effects of using these systems, fails to provide a conceptual framework from which to make regulatory decisions, and fails to provide an aesthetic from which to create media products, and fails to provide a method for consumers to rely on their experiences with other media in understanding the nature of virtual reality (Steuer, pp. 1-2).

Steuer defines presence as "the sense of being in an environment" (Steuer, p. 3). This usage is in accord with J.M. Loomis' humanistic definition of the terms presence and telepresence:

Presence is closely related to the phenomenon of distal attribution or externalization, which refer to the referencing of our perceptions to an external space beyond the limits of the sensory organs, themselves. ... When perception is mediated by a communication technology, one is forced to perceive two separate environments simultaneously, the physical environment in which one is actually present, and the environment presented via the medium (Loomis, 1992, p. 114). Steuer expands upon Loomis' definitions by defining virtual reality as "a real or simulated environment in which a perceiver experiences telepresence" (Steuer, p. 4). T.B. Sheridan asserts that in telepresence, "information is not transmitted from sender to receiver; rather, mediated environments are created and then experienced" (Sheridan, 1992, p. 122). Yet, Steuer recognizes difficulties with the term "virtual reality" and remarks that "Probably the most effective solution to the problem with the current usage of 'virtual reality' would be to abandon the term entirely (at least for research purposes) in favor of a more theoretically grounded term." Steuer suggests that much of the ambiguity of the term comes from the fact that most people think of virtual reality as a "collection of hardware" rather than as a "particular type of experience." (Steuer, p. 2)

Contemporary culture is involved in the juxtaposition of virtual and real environments to such a degree that the merging presence and telepresence is becoming both seamless and invisible. Perhaps the most readily obvious example of this kind of merging is the growing popularity of cell phones and the challenge to social and communicational boundaries that they present. Cell phones unite us as a culture and fragment our presence in and involvement with any one location as individuals. The social acceptance of cell phones indicates that our concepts of "interactive space" and "social space" are changing, and that we are becoming accustomed to being both present and telepresent at any given moment.

The same, of course, has long been true of the regular telephone, a point that should not be overlooked. In the context of communication, both regular telephones and cell phones are tools of virtual interaction because they enable a mediated juxtaposition of presence and telepresence. Each new form of media causes us to revisit standards of communication. With each development in interactive technology concern over "acceptable" communication space arises. At a basic level, virtual interactivity calls us to assess both the purpose of, and the need for, boundary as a function of social interaction. The rapidity with which our culture accepts any blurring of boundaries, along with the erasing and instituting of new boundaries, indicates our own ability to evolve. It also indicates our willingness to become embodied in virtual environments.

Frank Biocca's essay "The Cyborg Dilemma: Progressive Embodiment in Virtual Environments" considers "how VR interfaces are evolving to embody the user progressively." Biocca defines the cyborg's dilemma as "a paradoxical situation in which the development of increasingly 'natural' interfaces leads to 'unnatural' adaptations or changes in the user. In the progressively tighter coupling of user to interface, the user evolves as a cyborg." Progressive embodiment is described as the process in which "each progressive step in the development of sensor and display technology moves telecommunication toward a tighter coupling of the body to the interface. The body is becoming present in both physical space and cyberspace. The interface is adapting to the body; the body is adapting to the interface" (Biocca, 1997, p.2).

In the virtual reality of Majestic, the body, in some cases, became so adapted to the interface that the player was not sure whether he was playing a game or living a reality. The significance of the virtual interactivity of Majestic is ambiguous, as well. It is necessary that the participants know where one environment ends and another begins so that they can discern between virtual and non-virtual. The likelihood that some of the Majestic Game players might not be able to distinguish the demarcation between virtual and non-virtual environments led to the game's removal from the public sphere.

Our culture places ontological and phenomenological primacy and dominance upon the nonvirtual over the virtual, as is evidenced by our practice of defining the virtual as that which is generated by the non-virtual. We see the virtual as dependent upon the institutions and technologies of the non-virtual to sustain its existence. It was not possible, for example, to sustain either the virtual scenario of Majestic, or its service provider without money that the player subscription fee provided to EA.

When we speak of a virtual world being transformed past this dependence, we are no longer able to refer to that world as virtual. It has become "real." Applying a rather dogmatic materialism and economic determinism to explain this transformation, when the virtual creates, adapts, adopts, or otherwise interpellates into its sphere a mode or modes of production (those systems in place within society that generate commodity and economics) purely for its own use, it has achieved autonomy and is no longer virtual. Thus, it is impossible to speak of a purely virtual world uprooting the non-virtual world and replacing it. Perhaps one could invoke some philosophical depth in response to this assertion by saying that there are multiple levels of the "real" and multiple designations of the "virtual." Those who are of that viewpoint may reject the fact that for the present purpose, both "real" and "virtual" are defined unilaterally – i.e. "real" is all things real, and "virtual" is all things virtual. Pragmatically, however, this shouldn't be much of a problem, because such a viewpoint simply relegates all discussion to specific instances in which the dualisms of virtual and non-virtual are analyzed.

This line of reasoning, whereby the virtual can become transformed into the non-virtual can lead to a certain psychological, as well as historical and ecological, crisis of ontology. The Heideggarian sense of the Being of beings, of Dasein, of being-within, and of being at home (Heimlich) or "not being at-home in" (Umheimlich) rapidly becomes important to our sense of identity when we are no longer able to figure out the real from the virtual (Heidegger, 1927/1996). How is the individual participant in a virtual reality system that juxtaposes the virtual with the real to reckon his or her existence? How is the individual to position him or

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herself?

For that matter, do we now live in a virtual environment rather than a non-virtual environment? We live in a non-virtual environment because our environment has produced and is continually producing the modes of production by which it is able to sustain itself. However, it could be that history is a continual process of evolution through which the virtual gradually becomes non-virtual. Yet, if this were the case, what forces are at play in bringing about both the process that leads up to transformation and the moment in which the transformation takes place? Are we, as a culture or as individuals, able to be privy to an experience of epiphany wherein we become aware of this transformation, or must we seek a completed teleology, a complete cycle of beginning and endpoint, for this transformation to become evident to us?

The instance of transformation between the virtual and the non-virtual is driven by a contradiction with the virtual that the non-virtual originating force is unable to reconcile. The moment in which the non-virtual world is unable to accommodate and to exist simultaneously with the virtual, and must change its forms and articulations in order to accommodate the virtual, is the moment of deepest change. It is a moment of change in cultural consciousness, change in modes of production, change in ideology and institution, and change in historical era. The current juxtaposition of the real with the virtual as it pertains to the game Majestic is not an instance of this level of deep transformation. We are still aware of the demarcations, and those demarcations are both functional and supported by our culture.

It must be mentioned that concern for the virtual has existed down through the ages beginning with such ancient examples as Plato's "Parable of the Cave," (book VII of *The Republic*, 360 B.C.E.) and Lucretius' *De Rerum Natura* (50 B.C.E), and continuing through modern times in films such as Michelangelo Antonioni's *Blow-Up* (1966), Terry Gilliam's *Brazil*  (1985), David Fincher's *The Game* (1997), and Andy and Larry Wachowski's *The Matrix* (1999). Although the term "virtual" has accrued a particular meaning in the age of late modernism and in the context of cyberspace technology, examples of the virtual being juxtaposed with the real have existed in every genre of media and in every era of philosophy. The juxtapositions have simply had different guises. The interactivity and convergent nature of "new" mass media re-forms the problem of discernment between fact and fiction into one of presence versus telepresence or, in the case of Majestic, virtual versus real.

Fictional and philosophical traditions alike show us an ugly picture of what happens when we lose the ability to discern between what is real and what is virtual. We look at the apocalyptic way many writers and producers of media present the virtual world running amuck and taking over our non-virtual existence and we come away thankful that such a situation has not destroyed our own world and obliterated our own individual existence.

This dilemma, however, if dilemma it is, is hardly new. In Oscar Wilde's play, *Intentions*, the character Vivian comments that "Paradox though it may seem - and paradoxes are always dangerous things - it is none the less true that Life imitates art far more than Art imitates life" (Wilde, 1891). This was a powerful expression of the Romantic aesthetic of the day. Today, we are facing a similar paradox, the ramifications of which are equally as dangerous on the social level, and not nearly as romantic. Do we distinguish between life and art, between mimesis and reality? Do we wish to live "happily ever after" in the way that many literary and filmic traditions portray as a standard to be followed?

The paradoxical concern, and thus the danger, is that our current forms of mediation and mimesis will alienate us from ourselves and from our world. Are we, as Jean Baudrillard suggests, alienated from the perfection of contemporary, capitalist American life that Disneyland

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presents itself to be? Is the simulacrum of Disneyland truly more real than America itself? (Baudrillard, 1983) Although Baudrillard may tend to get carried away in his aphorisms, the concern in his writings over the relationship of the real to the virtual is far from being his, exclusively. Baudrillard's paradigm of the simulacrum actually owes both to Lucretius' *De Rerum Natura* and, ultimately, to Plato.

There seems to be a contradiction of being and of acting, of ontology and of phenomenology, in the virtual. On the one hand, we yearn for the virtual. We play at bringing it about and use it for recreation and escapism, and as an underpinning for philosophical, metaphorical, and allegorical meditation. We exhibit futurism with our world fairs and our wish list of "gee-whiz" media technologies that can bring the world to our doorsteps in order to, as Neil Postman once put it, "amuse ourselves to death" (Postman, 1986). On the other hand, however, we fear being both being replaced and not having a place. We fear becoming casualties of evolution. We have invested the virtual with these fears, and have aligned it with the fictional and with the simulated.

There is something potentially more disturbing going on here than the participation in a murder mystery in which you get e-mailed by a simulated murderer or voice-mailed by a screaming, simulated soon-to-be victim. There is the looming threat of Baudrillardian hyperrealism. Howard Rheingold comments that "hyper-realists see the use of communications technologies as a route to the total replacement of the natural world" and that:

The most radical of the hyper-realist political critics charge that the wonders of communications technology skillfully camouflage the disappearance and subtle replacement of true democracy -- and everything else that used to be authentic, from nature to human relationships, -- with a simulated, commercial version. ...

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Why torture people [political dissidents, or other 'trouble-makers'] when you can get them to pay for access to electronic mind-control? (Rheingold, 2000, pp. 317-318)

The danger that alarmists fear is that the simulation will become socially and politically more "real" than real life situations whose contexts are buoyed by actual socially overdetermining economic, political, religious, etc., institutions. People will then begin reacting more en masse to the inconsequential world of simulation than to the real world. When this happens, the argument goes, one of two things, and possibly both, will occur: 1). The economy and socio-political structure of our society will collapse because people are producing in simulated situations rather than "actual" ones and/or 2) The wily hegemony of our society will further the narrative and blur the ability to distinguish between reality and simulation, whereby, as seen in the Rheingold passage, "electronic mind-control" will be exerted by the same hegemony over the hapless worker-inhabitants of simulated realms.

This bit of melodrama in mind, it is interesting to note that EA has chosen to replace Majestic with various SIMS types of game scenarios. Unlike Majestic, the SIMS games do not use other forms of conventional communication media to contact their players outside of the Internet. Luc Barthelet, Senior Vice President of Electronic Arts, comments that:

EA is still aiming at the Web... The Sims Online banks on the success of the Sims PC game and all its expansion packs – The Sims Vacation, The Sims House Party, The Sims Livin' Large, and The Sims Hot Date. 'EA's building a community for people to share their experiences. The Sims Online is a virtual world where players can create a SIM recreation for themselves or whoever they want to be. Players have a lot of freedom (Aquino, 2002).

It is unlikely that anything as dramatic as a loss of a sense of reality would have happened as a result of people playing Majestic. However, we are just beginning to explore an age in which our media can contact us, and can communicate with us in ways that are more overtly "human" than ever before, far beyond your ATM thanking you for performing a transaction. Similarly, we are learning to use our varying forms of media to create recreational, or, in the case of flight simulators, police training computers, and war-game scenarios, utilitarian environments that are more and more life-like. Perhaps one day, as critics of hyper-realism fear, we will not be able to tell the difference between a real environment and an artificial one. Whether this completion of a version of the Turing Test is apocalyptic, revolutionary, dangerous, or simply another way in which human beings exist and react within an evolving ecology of media depends on the manner in which new media systems are used and valued. We need to remember, however, that it has always been this way with any tool, whether the tool is a hammer, an explosive, or a computer.

Mundane instances in our everyday, mass mediated lives make it difficult for us as individuals and as a society to discern between presence and telepresence, and thus between real and virtual environments, under Steuer's experiential definition of VR. Cell phones are an obvious example, yet so are computerized telemarketing systems that do not need humans to contact us. The virtual components that made Majestic so controversial and in some ways frightening as a game that blurs the boundaries between real and virtual environments, are already present and accepted in our mass mediated culture. Virtual technology has already been reaching out to non-virtual space in such a thorough fashion that we are not always aware of it. Majestic illustrates an experiential crisis. We are anxious about the potential for virtual environments to encroach upon our "real" environments. Ironically, this encroachment, this blurring, this re-definition of the relationship of real to virtual environments, has already taken place in mass communication technologies that further the practical juxtaposition of presence

and telepresence.

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