Computer mediated political communication: An empirical approach towards representing political action in the spatial context of Collaborative Virtual Environments

The rise of a virtual-space dependent public sphere

Nikolaos Kaimakamis[1], Dimitris Charitos[2]
Laboratory of New Technologies in Communication, Education and Mass Media Dept. of Communication and Media Studies, National and Kapodistrian University of Athens
[1]nikaimakam@yahoo.com, [2] vedesign@otenet.gr

This study focuses on the creation of three-dimensional online spaces, known as Collaborative Virtual Environments (CVEs), where mediated social interaction amongst participants takes place in real time. It attempts to examine whether it is possible for political communication to flourish in such environments, as a case study of the design aspects needed to be taken into account in creating communicating spaces. We entered the collaborative virtual environment "There" as an avatar and monitored the agenda setting of its two major media. The fact that the whole world is designed as an island complex and holiday resort has an impact on the unwillingness of the avatars to talk about world politics, or even deal with the worlds' political issues in the official media. Our main conclusion is that public sphere as conceived by those who enter a CVE relies heavily on the way that the world itself is designed. This leads to a series of questions concerning the role of architecture in creating virtual spatial contexts for communication.

Keywords: Collaborative Virtual Environments; political communication; virtual reality; public sphere.

Introduction

This paper aims to study the way that political communication is mediated in a Virtual Environment, as a case study that helps us understand the meaning of signs and symbols in designing a collaborative virtual space where a growing number of people will interact in real time. By examining the relation between what is really happening in such an environment with the agenda setting in the media referring to it, we try to identify the role of the architecture of a three dimensional communication space for the acquisition of this environment's spatial knowledge by its residents and visitors. We focus on the emergence of an online public sphere in the context of desktop virtual environments, which are highly populated and provide their users with a lot of information in real time, in a way that resembles everyday life offline.

Computer Mediated Communication in a CVE

The creation of online virtual communities defines a new spatial context for communication, in which people interact with each other and with the objects they find in them. The first online communities were text-based environments and their members lacked the possibility of developing a sense of space and physical contact within them. Later on, the emergence of MUDs and MOOs showed that even in text-based communication environments, there was a need for using space as a metaphor for establishing a context where online communication occurred. As Steuer (1995) points out, virtual reality is a simulated environment in which the user has a sense of telepresence. The concept of telepresence could be defined (Charitos, 2005) as an illusion that a user faces when he believes that he is in a different synthetic environment than the one that is surrounding him in reality. A virtual environment is defined by Hillis (1999) as a representational space in which specific spatial representations are offered to the people who enter in it. Such an environment may function as a context where communities are formed. The members of such a community have the possibility of leading a life of their own, by interacting with others in real time and within environmental parameters that define a new type of communicational background. Collaborative Virtual Environments demand the presence of many people who conduct a series of communication practices in real time, by using not only text, but also movement, bodily communication, spatial behaviour and "spatialized" auditory information too.

Thompson (1999) has adequately described the emergence of new media as a new communicational environment of our time. In his research he showed that this new environment's basic characteristics are globalization, lack of government control, constant flow of information and interdependence among its users and material surroundings. Computer Mediated Communication, in Mantovani's thoughts (1999), is concerning the convergence of technology and media, which tend to lose their basic features and transform to a field of social action no different than the real world that surrounds us. In that way, Computer Mediated Communication is based in computer technology in order to create new social environments of collaborative action. In our online life we are offered a new set of possibilities regarding our behavior, which are situation driven. This means that we "reside" or "dwell"[1] online and we create plans of action in computer generated spatial contexts, which help us communicate in other ways than the ones we are used to in our everyday life offline.

One of the most common fields of Computer Mediated Communication is the creation and use of a Collaborative Virtual Environment. In this three dimensional virtual spatial context, the so-called "synthesis effect" (Hillis, 1999) comes to life. This effect implies that actions taken in such an environment are capable of producing a series of complex meanings which elsewhere expressed[2] would be of no use. This remark could be better understood, if we try to imagine an avatar[3] constantly moving in a CVE among others, performing dance moves or acrobatics. An action like that would have the result of other avatars coming close to it and /or being fascinated by the ability of its user to perform such moves in a virtual reality environment, whereas in real life such an action in a sidewalk of a modern western city would make the majority of the passers by avoid any contact with the person moving that way.

Acting and navigating in a CVE

After examining the behavior of avatars in a virtual world, Rankin and Spence (1999) have discovered

---

[1]   In Heidegger's conception of the word (1971)

[2]   in real life, for example

[3]   McLellan (1994) names the representations of the participants' bodies as "avatars", which are displayed to them in a virtual reality system. Avatars are therefore three-dimensional human representatives or could even be artificial intelligence entities simulating human behaviour.

that the first thing that crosses the mind of a user in a representational type of three dimensional spaces is the basic intentions he or she has before entering the virtual world. Secondly, a behavioral strategy is designed by taking into account those pre-existing intentions. The next step taken by the user is an observation of surroundings in order to identify the potential for acting within this environment. This step is accompanied by the creation of a mental model, which represents the best route that one needs to follow in the world so as to meet his or her needs. Such models are being used by every avatar and it is the combination of these models of behavior that provide the virtual world with its vitality and independence. On the other hand, the way this world is created and the interface through which users interact with the system are two major factors that determine the mental models of avatars that interact in it. Passini (1992) refers to the process of acting in a physical environment by creating at first a cognitive map as a form of understanding the surroundings, then moving to a decision-making process for planning and structuring actions and finally transforming decisions into behavioral actions with a person's decision-executing ability. If we hypothesize that the acquisition of spatial knowledge relating to virtual space occurs in a similar manner as the acquisition of spatial knowledge in a physical context (Charitos & Rutherford, 1996), then we could suggest that cognitive maps representing CVEs are created by using a combination of locational and attributative information.

Steuer (in Biocca & Levy, 1995) associates the actions of users with the potential for alteration of some spatial element and focuses on the two main characteristics that make communication easier in a CVE. He notices that the level of active interaction of the user within the virtual world determines the possibility for changing elements of the scenery in which he is socializing with others in the CVE. Furthermore, the vividness of the visual elements of the CVE is another crucial factor for computer mediated communication in a CVE, since it may affect the richness of aesthetic information the user receives within the environment. It can be suggested that the design of the spatial context in a CVE is dependent on the arrangement of its spatial elements as well as the semantic features embedded within it. The way a user will act in a CVE, however is dependent on the level of interaction provided by the environment, along with the aesthetic richness that is provided to users of this synthetic world.

Attempts have been made to categorize the spatial elements as well as the space establishing elements that virtual environments (VEs) may consist of (Charitos, 1997 and 1998) as well as to explain their functionality. Landmarks, for example, are predominant space establishing objects within the context of a VE, which may play a major role in the generation of landmark knowledge acquired by a participant, when navigating within a VE. The arrangement of objects in a VE apart from establishing spatial entities and guiding navigational behavior may produce signs and therefore may communicate meaning. The virtual world's boundaries may determine spatial entities in varying degrees of explicitness, whereas thresholds may signify the beginning or the end of something or the transitional experience of moving from one point of the virtual universe to the other. The physical material properties are less relevant in the context of a VE than their semiotics.

Landmarks may sometimes be less important than signs, bearing in mind that navigation in a CVE is very much dependent on the purpose of this VE. In an entertainment oriented virtual world like "There" for instance, where the basic purpose of avatars is to socialize, a sofa or a seating place function as signs of avatar interaction and not only as landmarks of a meeting place. Furthermore, there are special places, hidden from the crowd, which function as places for sexual activity among avatars. Primary environmental information implied by the arrangement of spatial elements aids participants to anticipate forthcoming events or direct them towards significant spaces. Additionally, secondary environmental information from objects such as signs or symbols provides spe-

cific direct environmental cues (Charitos, 1998).

The perception of space in a CVE is an important element of someone's actions in it. The creation of behavioral models in a virtual spatial context may be dependent on the mental model a user creates when entering in it from a desktop VR system. The creation of an atmosphere of a virtual environment is a result of the spatial meaning this environment provides its users with. The atmosphere, defined as the objective properties of an environment that metaphorically exemplify structures of feeling through the creation of embodied experience, is dependent on the design and the understanding of a virtual space (Spanou & Charitos, 2003). The designed VE, where avatars interact with each other gains a symbolic form not only by its individual objects and their visual properties, but by its spatial design and arrangement of all elements that the environment consists of or in other words by its "architecture". Accordingly, actions taken in a CVE become a combined consequence of the needs and decisions of its residents, along with the possibilities afforded by the CVE's spatial context, as this is determined by its "architectural" design.

Life and social interaction in a Collaborative Virtual Environment

In order to study the exact communication patterns that are followed by participants in a Collaborative Virtual Environment, so that we could understand if and how political communication might occur in there, we decided to enter one of these CVEs and monitor its media agenda setting. For this reason we created an avatar and entered the virtual world "There"[4]. Our method of research combined observation and qualitative media monitoring research in the official journals of the world. By presenting ourselves as an avatar in the world we could participate in various activities happening exclusively there, interact with other avatars in various ways, make new friends and create all kinds of "cyber relationships", discuss, compete, join activity or other discussion groups, etc. During this period of time we were per-

forming media monitoring tests in the two official electronic journals concerning the CVE There, the electronic newspaper "Life in There"[5] and the magazine "The Voice of There"[6].

We studied the agenda setting in both journals and we arranged the various articles in 10 major categories one of which was politics. The articles in this category were either written about real life politics or about political issues concerning the life in There. For each category we measured the frequency of its appearance in the journals' pages, along with the level of importance that it was given. This was a factor calculated by the number of photographs that each article was accompanied with, the publication of a photograph in the cover of the magazine or the newspaper, the length of each article and the appearance or not of the article's contributor name. In that way we managed to gather information concerning what is higher in the avatars' interest when they "dwell" in the virtual world. We wanted to discover whether there was interest in political issues and coverage in the two main journals of the world, whether it was about real life political issues or other matters concerning solely life in this CVE.

The results of our media monitoring research are shown in the following tables. In Table 1, we clearly see that the subject that is of the higher level of importance in the newspaper "Life In There" is the Events and Activities organized and taking place in the various regions of the virtual world. Information about the world itself along with tutorials takes a second position. Politics is not at a high position as far as the number of articles, the level of importance or the frequency are concerned. As a general conclusion we notice that the readers and the residents of the virtual world are more interested in various activities (parties, contests, sports etc.) and the way they will become more familiar with various places within the world.

The situation is slightly different in the media monitoring analysis of the agenda setting in the of-

[4]   http://www.there.com

[5]   http://www.lifeinthere.com

[6]   http://www.therevoice.com

Subject	Number of Articles	Level of Importance	Frequency
Events & Activities happening in There	49	225	14 - (7)
World Info & Tutorials	12	60	10 – (7)
Biographies & Presentations	8	40	6 – (6)
Other	5	23	5 – (5)
Comments on Being There	4	22	4 – (4)
Interviews With Avatars	3	18	3 – (3)
Politics	2	4	2 – (2)
Announcements – News	1	2	1 – (1)
Financial & Market News	0	0	0
Real World Gatherings	0	0	0

two official journals.

By monitoring the agenda setting of a virtual world's media we have discovered that there is a high interest in material elements of the virtual world by the readers of these journals, a fact that shows that spatial knowledge of a virtual world is of great importance as well. The articles concerning information about the world itself and tutorials of how to interact in it are of high interest in both journals. It seems that it is not the objects of the virtual world that matter, but their semiotics is of high importance, since they generate a significant amount of articles dedicated to them. We begun to suspect that political communication rarely occurs in this virtual world due to the fact that there is no political communication meaning attached to the objects that can be found in "There". A series of visits inside the world meant to prove that this remark is true. We introduced the avatar "nikaimakam" in the world, who was trying to meet as many other avatars as possible and join many discussions. The majority of the avatars we have met during a year of visits in the virtual world were willing to talk to us and become

ficial magazine of the world There, "The Voice", as it is shown in the following Table 2. Here we see that the readers are more interested in reading articles presenting places and other residents, along with the articles concerning activities happening in There. Financial and Market News score a high level of importance and are mostly focused on what an avatar could buy using the virtual world's currency which is called "Therebucks". Politics is of higher importance here than in the "Life In There" newspaper, but it still remains at a low position in the magazine's agenda setting.

Using the above remarks, we produce the following Table (3) where all findings are put together, so that the agenda setting in both journals concerning this particular CVE is more easily understood. The events and activities taking place in There is the first, most important, most frequently published subject. Presentations of sub-worlds and biographies of avatars, along with tutorials and information about various places in There are of high interest by the media. Politics and real life don't seem to be considered as important by the journalists and the readers of these

Subject	Number of Articles	Level of Importance	Frequency
Biographies & Presentations	13	78	11 – (7)
Events & Activities happening in There	13	62	9 – (6)
Financial & Market News	9	54	9 – (6)
Comments on Being There	8	38	7 – (6)
World Info & Tutorials	8	48	7 – (6)
Announcements – News	7	18	6 – (6)
Politics	7	21	5 – (5)
Other	4	22	3 – (3)
Real World Gatherings	2	7	2 – (2)
Interviews With Avatars	0	0	0

Subject	Number of Articles	Level of Importance	Frequency
Events & Activities happening in There	62	287	23 – (8)
Biographies & Presentations	21	118	17 – (7)
World Info & Tutorials	20	108	17 – (7)
Comments on Being There	12	60	11 – (7)
Financial & Market News	9	54	9 – (6)
Other	9	26	8 – (6)
Politics	9	25	7 – (6)
Announcements – News	8	20	7 – (6)
Interviews With Avatars	3	18	3 – (3)
Real World Gatherings	2	7	2 – (2)

our virtual "buddies". In the majority of the chats we had we used or tried to use the voice over IP feature that is offered in the standard subscription in There[7].

In addition, we were constantly trying to have political discussions inside the CVE about the current international political affairs like the war on Iraq, the possibility of the US invasion in Iran due to the nuclear program of the country, the Bush doctrine in the middle East, the referendum for the European Constitution in France, the prices of oil and the effects of globalization in the world. Most of the avatars declared that they were interested as individuals in their real life in such matters, but they also made it clear that they are not willing to have discussions like that in There, since they believed that the first reason for introducing themselves as an avatar in such a world is to have fun and make new friends. Many said that this is an enriched way to stay in touch with friends and loved ones that are far away; better and

much cheaper than a typical phone call[8]. We discovered that there were a great number of people with physical disabilities or people with special sexual preferences who used the CVE in order to lead an alternative life to their real one. Finally, many teenagers were inside There trying to meet online sexual partners or fall in love with other avatars.

We didn't manage to find any interest in any political affairs concerning the virtual world itself, which had no government, except the world regulators, which were the creators of the CVE. The only election process we had experienced was the selection process of avatars that would act as members of the new Member Advisor Board (MAB). This is a council which helps newly entered avatars in interacting with all the features of the world and is elected by the residents in a simple process. There was only slight media coverage of this event. Nevertheless, although we have discovered that more than 50 political groups are created in There, they remain inactive and there are no political events happening in this CVE.

Conclusions

Bishop (2005) has written about a model of understanding and influencing behavior in virtual communities and has showed that one of the main principles being active in such a community is that an actor will carry out an action based on how he or she perceives the surrounding environment. In order to create the right circumstances for the political message to appear and be delivered to the members of a community, as Aristotle in his book "Rhetoric" has suggested, one must be willing to participate in the community affairs. The environment must also be challenging enough in order to facilitate each individual's social participation and this implies that the public sphere must be easily perceived by all the citizens. Bishop (2005) suggests that in a virtual environment this can

---

[7] Usually linguistic information is communicated via written text in a CVE. New CVEs like There, however, support the simulation of sounds caused by user's movement in the world, along with communication of interlocutors' voices over the Internet Protocol.

[8] It was fascinating to meet a father from Ohio and his son who was studying in New York, who used the virtual world in order to communicate to each other every day.

only be done by the creation of the so called "state of flow" which is defined as a state of mind where an actor is able to act with total involvement, narrowing his or her attention focus and whereby he or she experiences a loss of self – consciousness.

The expectations and the behavioral plans of users in a CVE are dependent on the possible situations provided by the combination of the material elements that can be found in a virtual environment and the communication patterns that are followed by the residents within a CVE, which are partly determined by the CVE's environmental context and the resulting spatial knowledge that these users acquire by "dwelling" in it. In the world "There", we didn't manage to find a politically oriented communication situation. On the contrary, various activities are emphasized (socializing, sports, flirts, etc.). The objects of the CVE create an atmosphere that is not keen on politics, a fact that can be considered as a reason for avatars to believe that political communication is not suitable in this certain entertainment oriented CVE. The public sphere in "There" is highly dependent on the state of the system and not on the peoples' needs. One could conclude that the public sphere in the world "There" is dependent on the situation that is created by the design of the world itself.

Our research in the virtual world showed that in such a CVE where the state of flow is created for purposes other than politics (sporting activities, online sexual behavior, etc.) it is not possible for computer mediated political communication to occur. The public sphere in a Collaborative Virtual Environment is space dependent, meaning that the way a virtual world is designed affects the behavioral models of the members of this virtual community. A sort of "communicational architecture", involving the design of semantically charged spatial elements and objects, needs to occur for appropriately creating a three dimensional context in a CVE where real time social interaction among avatars representing real people will take place. The virtual community breeding inside a graphical user interface based on virtual

reality is highly dependent not only on the technology applied[9], but on the environmental design determining the spatial context of interaction too. The world "There" is designed as an island resort where "the sun always shines", the avatars look happy, they have well built bodies, dwell in various clubs and places of activities, but where there is no parliament or even a sub-world where political activities occur. These facts result in lack of computer mediated political communication as this research has clearly discovered.

References

Aristotle: 2002, Rhetoric, Zitros, Athens.

Biocca, F. and Levy, R. M.: 1995, Communication in the age of virtual reality, Lawrence Erlbaum Associates, New Jersey.

Bishop, J.: 2005, A model for understanding and influencing behavior in virtual communities, Proceedings of the Post-Cognitivist Psychology Conference 2005.

Charitos, D.: 2005, Virtual Reality: A new kind of human-computer interface or a new communication medium?". Issues of Communication (Zitimata Epikinonias), Vol. 2.

Charitos, D.: 1998, The architectural aspect of designing space in virtual environments, PhD Thesis submitted to the Dept. of Architecture and Building Science, University of Strathclyde, Glasgow.

Charitos, D.: 1997, Designing space in virtual environments for aiding wayfinding behaviour, 4th UK VR-SIG Conference, Brunel University.

Charitos, D. and Rutherford, P.: 1996, Guidelines for the design and exploration of virtual environments, Proceedings of the 3rd UK Virtual Reality Special Interest Group Conference, De Montfort University, Leicester.

Demertzis, N.: 2002, Political Communication, Papazisi, Athens.

Heidegger, M.: 1971, Poetry, Language, Thought, Harper

[9] Such as the voice over IP features providing the auditory information in the visitors of There.

& Row, New York.

Hillis, K.: 1999, Digital Sensations: space, identity and embodiment in Virtual Reality, University of Minnesota Press, Minneapolis.

Holmes, D. (ed.): 1997, Virtual Politics: identity and community in Cyberspace, Sage, London.

Mantovani, G.: 1996, New Communication Environments: from everyday to virtual, Taylor and Francis, London.

McLellan, H.: 1994, Beam Me Up to My Avatar, VR World, Mecklermedia, March/April, pp.33-35.

Nayar, K. P.: 2004, Virtual Worlds: Culture and Politics in the Age of Cybertechnology, Sage, New Delhi.

Passini, R.: 1992, Wayfinding in Architecture, Van Nostrand Reinhold, New York.

Rankin, P. and Spence: 1999, A contrast between information navigation and social navigation in virtual worlds, in Munro, A., Hook, K., Benyon D.: Social Navigation of Information Space, Springer, London, pp. 185-190.

Shaviro, S.: 2003, Connected or what it means to live in the network society, University of Minnesota Press, Minneapolis.

Smith, A. M. and Kollock, P. (ed.): 1999, Communities in Cyberspace, Routledge, London.

Spanou, I. and Charitos, D.: 2005, Towards defining the "atmosphere" and spatial meaning of virtual environments, in Ascott, R. (ed.): Engineering Nature: Art and Consciousness in the Post-Biological Era, Intellect Books.

Steuer, J.: 1995, Defining virtual reality: dimensions determining telepresence, in Biocca, F. and Levy, R. M.: Communication in the age of virtual reality, Lawrence Erlbaum Associates, New Jersey. pp. 33-53.

Thompson, B. J.: 1999, Modernity and Media, Papazisi, Athens.