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The Constitution of Collective Memory in Virtual Game Worlds

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Abstract

In this paper, we explore the constitution of collective memory in virtual game worlds. Based on ethnographic data gathered during a three year participatory observation in two Massive Multiplayer Online Games (MMOGs), we study the collective practices, histories, memories, and identities that the members of two large guilds engaged and practice. Research findings indicate that the constitution of collective memory and identity of a virtual community drastically differentiates from regular communities in the physical reality. This is due to the issues of cultural heterogeneity, the interpretation of the virtual world's reality, the envisioning of other members 'true' identity, and the apprehension of circumstanced actions and events (i.e., historical context) taking place inside a virtual game world. In order to overcome such obstacles, members of a MMOG virtual community make extensive use of peripheral discussions using metaphors and analogical reasoning, while in order to preserve their collective memory and identity, they instrumentally rely on war stories (historical narratives), cases of personality checks (member and individual roles), and other communicative practices for manipulating and reshaping collective memories (i.e. misinformation though propaganda).

Keywords: MMOGs; Virtual game worlds; collective memory; persistence.

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The Constitution of Collective Memory in Virtual Game Worlds

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The advent of the Internet, social computing, and Computer Mediated Communication technologies altered our perception of the physical reality, communicative expectations and relation with others; many of our every day practices changed radically. Our practical knowledge, stereotypes and beliefs, our embodied positioning in the physical and social world, and our very identity as members of a collective shifted from the local and close spatiotemporal proximity at-hand to the global and persistently available virtual world. By the term *virtual world*, we refer to a “synchronous, persistent network of people, represented as avatars, facilitated by networked computers” (Bell, 2008). These spaces of interaction offer an information rich environment where participants can immerse and interact with the virtual environment, organize collective action, and collaborate or compete with other individuals or groups. Due to the global availability of these virtual worlds, participants come from different cultures with different language and beliefs, norms and habits, ages and professions, and intentions.

In this paper we focus in *virtual game worlds*, or virtual worlds created with a game attitude. Although the elements of gaming and playfulness are evident to some degree in almost every virtual world, the main purpose of the virtual game worlds main is to offer a game environment where player can play a game scenario. Examples of virtual game worlds are the *Massively Multiplayer Online Games* (MMOG). MMOGs are persistent online games with an embedded task-accomplishing scenario (i.e., missions) and structure (i.e., player driven economy), where players can engage in cooperative or ‘solo’ practices. Moreover, they are globally available, interactive, and information rich systems, where thousands of players can play simultaneously in a non-threatening, plausible environment. Some MMOGs also explicit objectives of players to achieve, but they include rewarding systems, a set of well defined regulative rules, a virtual economy, and mechanisms for group management. Motivation behind participation in these virtual game worlds range form simple curiosity and fun (i.e., spent time playing a game), socialization (i.e., keep in touch with friends or meet other people), to education (i.e., learn new practices and develop new skills), and entrepreneurship (i.e., run a virtual business for real money). Popular examples of MMOGs include *World of Warcraft*, *Ultima Online*, *City of Heroes*, *Everquest*, and *EVE Online*.

One of the defining qualities of virtual worlds is *persistence*, that is, the virtual worlds’ capacity for continuous availability and ability to sustain connections almost 24/7. Persistence is a critical for the social dimension of every virtual world since it diminishes temporality and provides a sense of linear progression and stability, upon which participants can draw future trajectories. This sense of linearity and stability can sustain the development of personal and collective histories, all of which are interlinked into a single web of causality and significance. In this regard, we can talk about the history of players’ lives inside a virtual world. It is this history that allows the players of a MMOG to refer to past heroes and other significant events. We believe that the study of the practices, which assist the construction of personal or collective histories and memories inside virtual worlds, are of great importance because they constitute an integral part of the participant’s experience of the virtual (and non-virtual) world. How co-

memorable history develops inside such virtual worlds is an issue yet to be explored. To this end in this paper we explore the practices of collective memory constitution in virtual game worlds.

More particularly, we study a case where the company behind the MMOG *Earth & Beyond* (E&B) decided not to continue supporting the content and code development of the game, and after six months to shut it down (an event named as ‘the sunset’). This decision had as a result of a huge commotion in the player base. Many players cancelled their accounts and left the game immediately, while others remained online until the very last second before the sunset. Eventually, all players felt ‘homeless’ and as ‘refugees’ and many moved to new MMOGs to replace their lost identity. Similar studies highlight when players ‘migrate’ from one virtual world to another, they tend to preserve a play culture and pattern even when the new MMOG promotes a different game-style (Pearce, 2006).

Ethnographic data was gathered during participant observation of the leader researcher in the E&B virtual game world from September 2003 until March 2003. The study continued for another two years in another MMOG, the *EVE Online*, where many of the ‘refugees’ tried to find a new home. During this period, the researcher became member of a large multinational and then a national community where he was able both to observe and engage in collective actions of memory constitution. Our observations have also been enriched by interviews, online discussions in blogs and forums, as well as a quantitative research on the usability issues of *EVE* that affect the collaborative learning. In this quantitative inquiry, I used an online questionnaire which was available to players for a period of almost one month in an English, Spanish, German and Greek version. A total of 1056 players from 56 different countries responded in this study, mainly from USA (20%), UK (20%), Germany (17.7%) and The Netherlands (5%).

In the next section, we briefly review the current theoretical trends in the literature of collective memory and identity. We then move our focus to virtual game worlds and their inherent capacity to sustain communities. Then, and after presenting the setting of our research, we focus on issues of collective memory and identity constitution in relation to the ‘sunset’ of E&B and the events that took place following. We conclude our paper with our main research findings, as well as research limitations and implications.

The Social Construction of Collective Memory: A Brief Review

Sociologists insist that the definition of collective memory is not easy, due to lack of theoretical agreement “particularly [in] the relationship between experience and collective memory, the process by which such collective memories might be formed, the types of events that might be likely to become collectively remembered, and the types of groups that might share memories” (Harris, Paterson, & Kemp, 2008, p. 3). On an excellent work that presents the multidisciplinary studies on this topic, Olick and Robbins (1998) highlight the diversity of views on collective memory and describe them as a “nonparadigmatic, transdisciplinary, centerless enterprise.”

Olick (1999) studies memory focusing on how individuals work together in society and how their operations are structured by social arrangements. He compares the concept of social memory to other terms like commemoration, political tradition, and myth and identifies two ‘cultures.’ The first one is annotated as ‘collected memory’ and refers to aggregated individual recollections, official commemorations, collective representations, and disembodied constitutive

features of shared identities. This draws on the assumption that only individuals do remember, and thus collective memory within a group consists of the aggregated individual memories of members of the group. This thesis also entails that individual memories can be archived in repositories, and that in order to study the dynamics of collective memory, we should focus on individuals and their narratives about their ‘images of the past.’ The second culture is called ‘collective memory,’ and is similar to Halbwachs’ social framework of collective memory. Here, groups provide the definitions as well as the divisions by which particular events are subjectively defined and remembered collectively. Hence, the process of remembering is treated as an active and constructive process rather than as a reproduction. Schwartz makes a similar argument when he asserts that “recollection of the past is an active, constructive process, not a simple matter of retrieving information” (1982, p. 374). Nevertheless, as Hirst and Manier (2008) conclude, “the two extremes in the array of approaches to collective memory are, in the end, not incompatible. In fact, they complement each other” (2008, p. 10).

In sociological studies, the notion of the collective memory can be traced back in the sociology of knowledge studies and to the Durkheim’s student Halbwachs (1992) who used the term to emphasize the socially nature of memory. He argued “it is in society that people normally acquire their memories, it is also in society that they recall, recognize, and localize their memories” (p.38). Halbwachs was particularly interested in how individuals use their mental images of the present to reconstruct their past and argued that such experiences emerge from their memory under a pervasive social pressure (that is, we always make sense of our memories in relation to our and other people’s identities). His primary thesis is that human memory can only function within a social context and that collective memory is always selective. Other researchers also point into similar suggestions. For example, Giddens (1984) asserts that the ‘unconscious’ can be understood only in terms of memory. He rejects the ideas that memory refers simply to the past (as past experiences) and argues that it is a recall device (a mode of retrieving information or ‘remembering’), and that memory and perception are very close linked. To this end, he suggests that memory is then conceptualized as a flow of activity integrated with the actively organization of spatial and temporal continuity via anticipatory schemata of a perceiver. This is also emphasized by Pasupathi’s (2001) model of autobiographical memory, which states that when a narrator tries to remember and communicate her/his memories, then she/he is most likely to be influenced by the perceived expectations of the audience, as well as by personal goals (e.g., impressing others). Such influences are critical not only for the situated shaping of the teller’s memory at that time, but also on what is remembered and what is forgotten in the future. In other words, “when we remember in a group, the way we construct our memory depends on the expectations and the reactions of the other group members” (Harris et al., 2008, p. 5).

Many cognitive psychologists have also highlighted the social constitution of collective memory. Vygotsky (1929) claims that memory is analogous to narratives and that it is shaped by cultural influences. In contrast to sociologists, cognitive psychologists conceptualize collective memory as close related to individual memory. An example is the idea of goal-driven remembering of individuals in decision-making groups. This is evident in Wittenbaum and Park’s (2001) study where members with low status tend to recall and discuss shared information that all members know, in order to achieve social validation and gain respect from others. A similar point is made by Cuc et. al. (2006) that argues the importance of a “dominant narrator” in the process of the formation of a collective memory. This highlights the importance of the emerging roles as well as the relationships of members with a group. Other cognitive

psychologists, including Basden, Basden & Henry (2000) and Tollefsen (2006) further delve into the idea of social construction of collective member.

The relationships with other people in a close social proximity are also important to the theory of transactive memory which focuses on memory recalls by asserting that close couples attempt to remember together by joining and overlapping their memory fragments (Wegner, 1986). Transactive memory theory is based on the idea that individual members can serve as external memory aids to each other. Wegner (1986) proposed that two types of meta-memories are maintained in people's minds – information about the subjects of knowledge of each member (i.e., areas of expertise) and information about the locations of the knowledge. Similar to Hutchin's (1996) distributed cognition, the theory of transactive memory underlines a cognitive interdependence between members of a group, and highlights the importance of 'indexed' knowledge for a group to develop a Transactive Memory System (TMS) (Hollingshead, 2001). In return, a TMS can serve as a facilitator of group's memory and be a valuable asset for team effectiveness in learning, viability, and overall performance (Lewis, 2004; Liang, Moreland, & Argote, 1995; Yoo & Kanawattanachai, 2002). However, the theory of TMS emphasizes the similarities rather than differences of memories among members of a collective and demotes phenomena such as forgetting, which are an integral part of remembering or the case of conflicting versions of collective memory between generations, even on commonly experienced events (Ricoeur, 2004),

In organizational and information systems studies, the concept of organizational memory was an offspring of the idea that organizations are analogous to information processing units. As a result, the seminal work of Walsh and Ungson (1991) treats organizational memory as a framework that can be used for information retention, acquisition, and retrieval in an organization. They suggest that the structure of organizational memory can be classified within six information "storage bins": individuals, culture (stories, mental models), transformations (the various processes and procedures), structures (roles within the organization), ecology (physical setting of the organization), and external archives (information and documentation). However, the use of such a mechanistic metaphor of memory suggests a drastically abandonment of the social characteristics of collective memory, such as emotions (e.g. Yaron-Antar & Nachson, 2006), social pressure (e.g. Halbwachs, 1992), politics (e.g. Misztal, 2005) and forgetting (e.g. Bowker, 1997) that play a crucial role in the construction of collective memory and knowledge. Feldman and Feldman (2006) make a similar argument when they propose to think of organizational memory as a process of remembering rather than as an object.

Contemporary research on organizational memory and knowledge criticizes the above framework to be too narrow and incomplete and has produced new directions on perceiving and inquiring individuals as actors of a larger collective and refined theoretical framework on studying collective memory (i.e. Spender, 1996; Weick, 1995). Such studies don't speak only on a collective memory, but also on a collective mind, knowledge, and learning. For example Weick and Roberts (1993), drawing on the work of Ryle (1949), define collective mind as "a pattern of heedful interrelations of actions in a social system." Spender (1996) calls for a need of an epistemological pluralism and argues convincingly that some aspects of implicit knowledge are only known collectively and that in order to understand memory, we need a theory of intelligence. In his framework, collective knowledge is about the tacit knowledge in a collective's habits, routines, and culture (Polanyi, 1966). Cook and Brown (1999) make a similar argument when they draw on Polanyi's explicit/tacit knowledge distinction and propose an

epistemology of practice as knowing in action. Their argument states that there are four forms of knowledge, namely concepts, skills, stories, and genres. Genres are consciously or unconsciously assisting individuals by providing a frame for interpreting explicit knowledge (Cook & Brown, 1999). For example, the interpretation of an article presented in two different 'genres' (e.g., a newspaper and an academic journal) reflect two distinct meanings. However, such 'genres' are not universal and differ to each collective. Additionally, Cook and Brown refer to the tacit nature of these genres, specifying that they are not explicitly learned or known among the individuals, but are rather emerging "as they are used in the context of the groups ongoing 'real work'" (1999, p. 392). This process of 'negotiation in practice' is crucial for meaning construction and learning within communities of practice (Brown & Duguid, 1991; Wenger, 1998).

A well known case of such negotiation is described by Orr (1996) and his ethnographic study on the practices of experienced technicians maintaining photocopiers. Based on his observations on the collective formation of narratives by the technicians, Orr concludes that conversational 'war stories' are significantly critical in the collective rectification of individual experiences and on the dissemination of personal knowledge of past events. Orr also annotates that through this process of negotiation of meaning, collective and individual identity is constructed, "as masters of the black arts of dealing with machines and of the only somewhat less difficult arts of dealing with customers" (1996, p. 2). Indeed, storytelling and conversations, are considered to be crucial mechanisms for sharing tacit knowledge and serve as mnemonic resources (Brown & Duguid, 1991; Swap, Leonard, Shields, & Abrams, 2001). It is only through storytelling and testimonies of the experiences of past events that a community can form a collective memory (Ricoeur, 2004). In accord with this critical stance, it is also evident that issues of trust are critical in the formation and sustainability of collective memory.

Finally, besides oral conversations, communities also use artifacts to represent their collective memories. These artifacts are objectified in the community's culture and collective identity and include symbols, signs, memorials, rituals, and others. Nora uses the term *lieux de memoire* (sites of memory) to annotate "cultural formations (texts, rites, monuments) and institutional communication (recitations, practice, observance)...[that] preserve the store of knowledge from which a group derives an awareness of its unity and peculiarity" (Nora, 1996, pp. 129-130). However, artifacts themselves are not to be treated as mere "storage bins" where collective memory resides. They simply serve as triggers of remembering or evidences on which, for example, historical claims are based. They are "technologies of memory" and they can also be used to manipulate collective memory, through selectively remembering and forgetting (Sturken, 1997).

To sum up, the pluralism of interdisciplinary views of collective memory highlight the distinction between memory as an object ('images of the past') and memory as a process (of remembering and forgetting). Moreover, there is a tendency to treat collective memory either as 'collected' (aggregation of individual memories) or 'collective' (where remembering reflects the social environment in which the mnemonic activity takes place and the social resources that this environment provides). In our research, we conceive of collective memory as a continuous social activity of negotiations of meaning and power, towards the objectification of collective knowledge. To this end, we focus on individual and collective practices of remembering and forgetting, as well as on artifacts that virtual communities deploy and maintain in order to assist such practices.

MMOG Virtual Communities and Collective Memory

MMOGs are different from other types of online games, such as internet games like chess or network role-playing games like tournaments. The main difference is that MMOGs present a persistent virtual world, where players cannot 'save' their game-flow progress and continue later. On the contrary, the game's virtual world is active almost 24/7 and available for a player to enter and interact. Most commercial MMOGs require a monthly subscription and players assume the role of a fictional character called avatar or character. Each character is capable of performing various activities based on some skills. The higher the level of a trained skill, the better the character can handle virtual tools and gain access to special areas of the virtual world. The game usually comes with a skill-tree, where players can draw the careers of their characters, a virtual currency for in-game trading activities, and various social events and fan festivals which motivates players and developers meet each other. Additionally, a MMOG is not just a graphical virtual world. It also has an official web site, where the developers broadcast the game's rules and mechanics, news, upcoming features, and events to the player-base. The site also contains a forum, where players and game developers come together and discuss various in-game issues.

The graphical virtual setting of the game is based on a fictional story and offers many scenarios, known as missions or quests. However, the game itself does not have a specific objective. There are some rules and scenario-based tasks that a player may choose to accomplish. Players may choose to play alone (solo) or to form temporary groups with other players. As a matter of fact, the high level of complexity of some advanced tasks strongly motivates players to join their expertise, efforts, and character's capabilities with other players. It is a common phenomenon to see players with similar game style and ambitions come together and form more permanent groups, known as guilds, clans, or corporations. These groups adopt a leadership model and decision-making mechanisms and organize themselves as a virtual community. They share knowledge and experience, organize collective actions (known as quests), and achieve a shared alignment towards common goals and objectives (Rheingold, 2000). The quality of persistence of MMOG, causes a sense of stability and continuity of the game flow, and can thus serve as the catalyst for sustaining long term relationships and histories (i.e. Taylor, 2006). MMOG virtual communities take advantage of the MMOG's persistence in order to construct and explore a collective identity (Holmes, 1997; Schaap, 2002; Turkle, 1997).

Recent studies focus on virtual communities emerging inside these virtual worlds and study phenomena of identity, economics, law, and learning (Gee, 2003; Steinkuehler, 2004). The educational capacity of virtual words has especially been acknowledged by a variety of researches and practitioners (Prensky, 2001; Steinkuehler, 2008). More recently, we see cases of large institutions using virtual worlds like *Second Life* or even MMOGs in order to facilitate cooperation and learning. A successful case is Sun's Virtual Workplace named MPK20. This platform offers an alternative virtual world to SUN's remote employees where they can perform their daily tasks in a common environment. At the same time, NASA builds its own MMOG for educational reasons. NASA's game promises a learning platform for students wishing to participate in a game space-simulation and to engage in accurate in-game experimentation and research.

Recent research on MMOG virtual communities highlight their cosmopolitanism, while the MMOG virtual worlds receive an exponential attention, mainly due to their capacity for socialization, playfulness, appropriation of literacy practices, and learning (Steinkuehler, 2008).

What is evident in most studies is the fact that MMOG virtual communities are not homogenous. Their members come from different professions, educational backgrounds, and vary in terms of age. The inherent anonymity and the play of identity may result in communities where, for example, a 12-year-old high-school boy is the leader of a large community of elder members. This could be a case where mutual alignment and communication would become an important issue for cooperation; however, most studies highlight the opposite (Kollock & Smith, 1999; Rheingold, 2000; Wellman & Gulia, 1999). The complexity of the MMOG task-accomplishing scenario motivates players to form or join virtual communities, where participants perceive their relationships to be intimate (Wellman & Gulia, 1999). In time, members of such communities form trustful and intimate relationships and develop a high degree of commitment and sense of belonging (Kollock & Smith, 1999; Wenger, 1998). New members are enculturated into the communities history and practices through the engagement on collective actions (Brown, Collins, & Duguid, 1989). To this end, anticipated reciprocity, reputation, sense of efficacy, and attachment or commitment to the virtual community are noted as main motivations for contributing knowledge in virtual communities (Kollock, 1999).

Nevertheless, knowledge sharing and learning in virtual communities faces many obstacles. For example, recent studies on multinational and virtual organizations, where social diversity in terms of ethical, sociocultural, and linguistic differences is more evident, reveal the existence of many problems arise that block communication and knowledge sharing (Pan & Leidner, 2003). Similarly, on another study of knowledge transfer and usability in virtual teams, Griffith et al. (2003) identify that the higher the level of virtualness in a virtual team, the harder it will be for individuals to acquire tacit knowledge for their teammates, and thus, there will be greater difficulty forming collective knowledge. In a more recent study, Kanawattanachai and Yoo (2007) bring evidences that TMS can even be formed in virtual team environments where interactions take place solely through electronic media, although they take a relatively long time to develop. In a virtual game world of space time distancing like a MMOG, memory is important for positioning individual experiences in temporal and spatial arrangements, and it provides users with a sense of seriality and presence (Giddens, 1984).

The Context and Method of Our Research

The research method chosen is ethnography, which was conducted through continuous participant observation and engagement into collective actions within MMOG virtual communities. One of the authors (the researcher) created a user account in MMOG and became member of a large community (known as guild, clan or corporation). To this end, we were able to study the whole phenomenon from the view of an insider, and capture spontaneous routine activities. Through our participation and longitudinal engagement with other player, we were not able to “understand the practices of *all* users, but ... [to] develop an understanding of what it is to be *a* user” (Hine, 2000, p. 54).

For the data management of our research findings, we used a custom-made database. During our participation in the setting and engagement in collective actions, we recorded any significant observations. These field notes were digitized, summarized, and stored chronologically in the database. This database was also used to store players’ profiles based on their behaviour online, as well as through face-to-face conducts in social events. By doing so, we were able to create a reference to an consistent persona for each player. Using specialized reports, we were able to cluster the historicity of social events online, and after retrospectively

reviewing them, we were able to indicate ‘black spots’ in our interpretation of the situation and thus be able to further construct questions to be asked to key agents (i.e., players or game developers) for clarification (Ward, 1999).

The unit of our analysis includes both individuals and guilds of players. Guilds were treated as well-organized groups, able to form and sustain a sense of collective identity, and to provide structures and opportunities for organized or spontaneous collective actions. Our observations have also been enriched by the collection and study of data from in-game chat logs, game news, developer blogs, posts in game’s main forum, but also from on-site observations of players in internet cafes during their engagement and engrossment to the gameplay. Additionally, in-depth interviews, both online and offline, were conducted with players in order to gain a deeper insight on their personal views and interpretations on the game’s historical events. Finally, a quantitative study was conducted on June 2006 in order to address players’ opinion on the game’s environment as a collaborative learning space.

Beginning September 1, 2003, the lead researcher created two accounts and two characters in the E&B MMOG. The first goal was to experience the life of a newcomer to the virtual game world E&B. The researcher soon became a member of a large multinational guild (we will identify this guild as Group A); after some time we had the chance to meet some of the guild’s members face-to-face. During the researcher’s “career” in this guild, he had the chance to become director in one of the group’s chapters. When the company behind the development of E&B decided to stop the game, and after a series of long internal discussions and arguments among the Group’s A members, the researcher followed a large portion of the guild and moved into another MMOG named *EVE*. The guild tried to adapt into the new game environment and for a while, most of its members seemed to fit into the new reality. After four months of intense participation in the group’s commons, the researcher became co-CEO in Group A. Nevertheless, and after about six months and a few internal disputes, Group A disbanded and most of its 124 members joined other guilds (in *EVE* terminology, guilds are known as corporations, but we will use the term guild for the sake of simplicity). At this point the researcher became member of a large nationally based (Greek) guild (Group B). We continued our research with Group B until the end of our participation in *EVE* at the end of February 2007.

Observations from the life of Group A provided us with a rich data set regarding the practices of collective remembering and forgetting among the members of the guild. Moreover, we were also able to participate in joint activities of collective memory constitution and thus gain a wide perspective of the dynamics of this social phenomenon. In order to test and validate our initial working hypotheses, we used our observations from Group B in order to juxtaposing them with those from Group A.

The case of E&B

Our research was initiated September 1, 2003 in *Earth & Beyond* (henceforth E&B), a space MMOG created by Westwood and later acquired by Electronic Arts. The game was released on September 24, 2002, and it was a science fiction MMOG. According to the game scenario, players were space pilots able to either walk inside stations or to board their ship and travel across the galaxy.



Figure 1. Earth & Beyond Characters Gathered in a Station.

During the character creation phase, the player could choose one of the three available races and one of the six available professions. Based on the chosen profession, the player's character had a set of initial skills and through exploring, trading, and fighting she/he could further train more skills. After the game's launch and with only few competitors in the MMOG market, E&B was soon became one of the favorite MMOG for sci-fi fans. According to MMOGCHART.COM, during the game's peak in late 2002, there were approximately 38,000 active subscribers. The game had three distinct servers for player to choose. This is how Eric Wang, E&B's Producer and Technical Director, describes the game in an interview just a few months before the game hit the stores:

Earth and Beyond is the first persistent state world set in space that gives the players the opportunity to do everything they've ever wanted to do in a space game. Players become the captain of their own space ship and can advance their character in many different ways -- exploring, trading and fighting, but best of all, they can do it with thousands of other people. Players will be able to explore over one hundred sectors of space, land on planets, fight alien life forms and make their fortunes all in a futuristic world where humans have just begun to breach the boundaries of the solar system. The only question is, "how far will you go?" (Aihoshi, 2001).

Player had the option to either play the game alone or to establish temporal groups. These groups allowed their members to share skills and bonuses and thus operate in greater efficiency especially in difficult missions. Moreover, players with similar ambitions and gameplay style

were forming more permanent groups known as guilds. Through a guild, players could better organize their game activities and collaboratively achieve better performance in hard situations.

In-game communication was achieved using the game's chat. Through the chat window, players could access public and private chat channels and communicate with other players in close proximity or other members in the same guild. Other ways of communicating was through emotes; players could command their avatars to express an emotional state like happy, angry, bored, and so forth. Additionally, they could use ship emotes like wave and cause their ship to wobble up and down, waving the wings. The wave emote was widely used for saying hello to nearby players in space.

During our participation in E&B, one of the authors became an active member of one of the largest guilds. The guild had almost 150 members and a well-structured leadership scheme with a commander and a vice-president, as well as many directors running each one of the guild's chapters. For example, there was a director for the mining chapter, another one for the military chapter, and so forth. Guild members were motivated to enroll in at least one of these chapters and participate in collective activities (i.e., mining ore from asteroids). The guild also had a Code of Honor where basic rules of behavior were explicitly stated, with penalties for those who do not comply with them. Member were also highly motivated to participate in discussion using the forum in the guild's web site and contribute with their experiences and knowledge by helping new members get used to the game's and community's climate and also to support decision making. This is how the commander of Group A encouraged new members to mutually engage in joint activities:

New members are now required to register for the forums to remain a guild member in good standing, This is part of a better guild communication strategy we would like to promote and encourage. Squires need to register as easy as that. If they don't, no promotion. (Excerpt from an e-mail to all members of Group A).

In late March 2004, the developers of E&B announced that they would not continue to support the game's maintenance, and that it would stop functioning September 22, 2004. Most players cancelled their subscription and moved to other MMOGs, some of them decided to stop playing, while others just continued to play the game until its end ('sunset'). On March 27, 2004, and after 726 hours of active participation in E&B space, our study continued in a similar MMOG named *EVE*. During that time, the researcher was an active member in one of the largest international guilds in E&B, and he was promoted to the role of the director in one of the guild's chapters. After a long discussion in the guild's forums on the topic of what game would be better fit the guild's style in terms of game play, many members decided to continue playing in *EVE*. After all, it seemed to be a normal transition since *EVE* is also a space themed MMOG and had many similarities with E&B. The guild established a corporation in *EVE* with the same name, but with a different leadership scheme.

The Case of EVE

EVE Online (or simply *EVE*) is a MMOG created by an Icelandic company named Crowd Control Production (CCP) and was released in May 2003. Like E&B, it is a space simulation MMOG (a 'space opera' as its players call it) and it uses a single server to host over 250,000 players. Currently, it holds the world record of 41,690 concurrent accounts online at the same

time. To support this huge amount of players, *EVE* runs on a large computer cluster, rumored to be the most powerful supercomputer in the gaming industry.

According to the game's scenario, the virtual world of *EVE* is located in a distant galaxy, with over 5,000 solar systems. Solar systems are connected through gates, and in each system there are interaction environments such as space stations to dock, asteroid fields to mine, planets to orbit, player owned structures, and Non Player Character (NPC – characters controlled by the computer). Players pay a monthly subscription to access an account, while each account can hold up to three characters. Players create their characters by giving them a unique name and by customizing their appearance. They also choose a one of the four races available, a gender, and a bloodline that influence the character's initial skills. Characters are represented in *EVE* as spaceship pilots, and their skills level of training determines what the character can do in the game (i.e., what ships he can fly). Characters have access in numerous skills and based on a skill-tree that defines skill prerequisites, they can choose a profession such as trader, manufacturer and combat expert. In contrast to E&B, in *EVE* the skill training occurs in real time and it does not affect gameplay.

Additionally, the socioeconomic structure of the game is based on corporations. Corporations are groups of players joining together for a common goal or purpose, and they are created and overseen by a Chief Executive Officer (CEO.) There are NPC and player created corporation, though characters can only be in one corporation at a time. Besides the CEO, corporation members can be assigned with several roles like accountant, personnel manager, factory manager, and so forth. The game also provides series of tools for the CEO to run the corporation. Such tools include corporate wallet and hangars, a taxation rate, roles and privileges, and standings with other corporations, which indicate their friendly or hostile relationships. It is also common in *EVE* for many corporations to join forces and establish alliances. Each alliance usually claims a territory in *EVE*'s galaxy, and after its establishment in the area, its members begin to exploit the area's resources. Additionally, alliances adopt a governance scheme (i.e., democracy) and establish rules of finance transaction (i.e., taxation system) and standings toward other alliances (i.e., Non-Aggression Pacts). Such economic and political institutions often become the reason for an alliance to thrive, dissolve, or declare war on another alliance.

Besides the unique name, each character is characterized by a security status (an algorithmically generated number that indicates grief actions against other players); an employment history (previous corporation the character was a member); and standings towards other players, corporations, or entire alliances. If two characters have negative standings, or if two corporations/alliances have declared war to each other, the players can fight in Player versus Player (PvP) combat situations. But not everyone likes PvP. Other players follow a more innocuous profession and become, for example, miners. They mine ores from asteroid belts and sell them as raw materials to others player who play the role of a manufacturer. This role-playing is commonly seen in MMOGs, and offers a deep level of immersion to the game's environment. In some cases, this role-playing can be more extreme, and players can become more engrossed into the game's storyline (i.e., players become pirates or mercenaries). In other words, the game provides various activities and endless possibilities of character development. Unlike other MMOGs with a predefined course of development – known as theme-park games – *EVE* is a sandbox where players can experiment with different game-styles.

Finally, in order for players to communicate with each another, the game provides various synchronous and asynchronous communication mechanisms, including a multi-channel chat system, an email manager, and private messages, as well as a forum in the game's official web site, where player and developers can discuss on game mechanics, rules and content. More recently, the game incorporated an embedded voice communication system. Beyond the official website, many players build their own fan-sites and blogs, and provide space to the rest of the community to exchange tips and workarounds, promote and trade virtual goods, and broadcast their achievements (using Kill-boards, which is an equivalent to the classic game's hall of fame). Others engage in the game on a much deeper level and develop custom applications that help players customize their characters, or better organize and interpret the in-game content. A case of such a popular application widely used by most of the players is a VoIP application that facilitates real time oral communication. Such applications are extremely helpful for assisting groups of players to better organize their collective actions.

The E&B Sunset and the Memories of E&B Refugees

When Electronic Arts (EA) announced that it was going to pull the plug on E&B, some of the players were already spreading rumors that their favorite game will come to its end soon. With an official announcement, the company responsible for its maintenance decided not to continue support the content and code development of the game and after six months to shut it down ('the sunset'). This decision had, as a result, a huge commotion in the player base and in extreme cases, many players claimed that they hated the developers so much for killing their game that they are going to boycotting EA Games until they brought back E&B. Many players left immediately while others remained online until the very last second before the sunset. Eventually, many players felt 'homeless' or as 'refugees' and tried joining new MMOGs to replace their lost identity.

Although most players kept their initial nickname and tried to apply their knowledge and play patterns to the new game, the transition from one MMOG to another was not an easy case (Pearce, 2006). Both E&B and *EVE* share many similar characteristics in terms of game-play and game scenario. Nevertheless, most E&B players claim that the simplicity and beauty they found in E&B was lost forever. There were a total of 5,763 petitioners begging EA to reopen the game, even in its original form. Others claim that they are willing to pay double the subscription fee just to get back online. Here is what Eliana, an E&B refugee from Germany wrote:

I am here to tell EA, that if they ever decide to reactivate E&B again, (even if its just the old client) that we both would sign immediately again, me and my brother would even pay the double fee if needed to support the running costs of E&B.

What is more important is that even that most players moved in other MMOGs, they still feel like E&B refugees. This is what Joan argues:

This was the most amazing game I have ever played. Was gutted when it was cancelled. Played SWG & Wow since then and neither imo is as fun to play as E&B. Everything about it was unique and soooo playable... bring it back!!

Another player from US also makes a similar claim:

This was the only MMOG I'd ever leave work early to play or take days off to play or call in sick after patch days. I have no idea why it is so addicting. But yeah, I'd drop WoW for this in a heartbeat. Nice to see others still miss this game too.

Nowadays, almost four years the E&B sunset, there is still an active E&B community seeking the revival of E&B. To this end, many fun sites exist and provide a common space for E&B refugees to gather and share their experiences in their favorite game. They also try to find old friends to form their guilds and support the revival of the game:

My wife and I are E&B refugees and we would both love to have this game back. We still use it as the standard to compare other MMOGs we play. We still keep in contact with old E&B guildmates and talk about adventures we had on there all the time.

In this, many game experts and E&B enthusiasts voluntarily joined their forces in order to create an E&B emulator. But what the E&B wished to get back is not just the game environment, but rather the 'full package' of it – that is, the community. This is how one of the E&B fans puts it:

The people who are still hoping that E&B comes back don't want the game back, they want the atmosphere back and that's impossible. People have changed. For many of us this was our first MMOG and by now we've gained quite some knowledge about how a game should be.

Indeed, what is more important in a MMOG is not the game environment itself, but the shared fantasy of the virtual world of interconnected players. What these players come to remember as a virtual game world is not just the game mechanics and interfaces, but the communicative and other social actions in which they were engaging during play. This has serious implications for our analysis of social phenomena of collective memory constitution and to this end, we will focus more on the collective actions among the members of virtual communities (i.e., guilds) that facilitate collective remembering and forgetting.

Collective Memory Constitution in Virtual Game Worlds.

The inherent capacity of MMOG to sustain virtual communities is widely recognized by most of players. During the quantitative part of our research, we asked the players to state if a membership in a corporation provided them with a sense of belonging, trust, and help. A percentage of 72.2 strongly agreed with this statement, while 62.4 argued that such memberships heavily assist players to develop their decision-making skills. As one of the players added:

Well, I wouldn't exactly call *Eve* a 'game'. Super Mario Brothers is a game. *Eve* is just an operating system that gives you access to the sandbox. The entertainment is up to the community.

Usually, when a player decides to become a member of one of the game's corporations, she or he visits its web page and fills in an application form or contacts one of its members online. It is a common practice that each corporation has one 'director' responsible for public relations and recruitment tasks. At the beginning, the new member will be granted with some basic roles and limited access to the corporations resources. During this trial period she or he will remain in the periphery of the communities core practices but will be also encouraged to participate in daily joint activities.

Continuous engagement, participation, and socialization by guild members intrinsically motivates newcomers to become part of the community's cultural context and to familiarize themselves with the community's language, politics, norms, rituals, and history. Fortunately, in our case, the guild used the English language for everyday communication. However, mutual engagement in Group A's joint activities was not always an easy process. For example, minor communication issues arose, especially during discussions of complex group activities (e.g., the guilds promotion plan to encourage recruitment or colonizing new regions of space). Consequently, we observed many episodes of misunderstanding. Nevertheless, it was those very episodes of dispute that forced members into processes of negotiation of meaning regarding the collective actions and the meaning of the collective. A vivid case of such negotiation of meaning took place during the discussion of merging Group A with another larger group to become a member of a large alliance of guilds. During the discussions on this topic, we noticed that the more abstract a concept was (i.e., alliance), the easier it was for misunderstanding to occur.

During our participation in Group B, the process of our enculturation was faster. This was due to the lack of communication problems, as well as due to our growing social distribution of knowledge, especially in terms of the game's mechanics, rules, and dynamics. Indeed, when we became members of Group B, we found that the "cultural pattern of group life" was familiar to us (Schutz, 1982). Group B also had a central CEO with a few directors for managing the collective. Due to smaller geographic distribution of its members, most of them had the chance to meet each other during nationwide social events. The level of trust between several members was so high that some members were sharing their accounts and characters with others. Moreover, the collective identity of Group B seemed to be more coherent, due to the tendency of its members to engage only in one type of collective activity, that of PvP. Indeed, recounting fights is a common topic of conversation among players (Taylor, 2006). Members were identifying themselves as proud "warriors" and they were frequently engaged in discussing the narratives of their past battles. This specialization and collective willingness to master the PvP aspect of the game also provided more time between players to discuss and analyze their previous shared experiences and to indicate any tactical errors.

A popular topic of discussion during a corporation meeting is the outline of the community's history and the discussion of future directions. In such cases, a member of the community serves as the dominant narrator that communicates collective memory among the community's members and beyond. Our observations indicate that the role of the best narrator emerges and it is situated in the circumstanced episode of a discussion. However, members with a tendency to speak loud and clear are often identified as the official narrator of the community's history. In our research case, such a role was granted unofficially, yet unanimously, in one of the older members of the community. The 'chosen one' was also granted with the heavy duty to broadcast the community's achievements in the rest of the *EVE* community (e.g., by issuing newsletters).

Collective memory is heavily structured through historical referents and as such, what is remembered to be part of the game's or a communities' history is crucial to collective memory (Nora, 1996). Communities usually rely on their collective memories to justify their in-game actions. In the virtual world of *EVE*, the history is a continuous subject of negotiation among individuals and communities. Since, for example, the shared understanding of *EVE*'s history is the bedrock for justifying actions of fair play, most strong political corporations try to establish their own presentation and interpretation of past events. Due to the digitized environment of social action in virtual worlds, historical events can be cross-referenced and traced back to their source. To this end, player use event logs, maps, and gameplay records to prove their version of history to be true. On one hand, this quality of traceability of past events strengthens the validity of historical events. On the other hand, the digital nature of such 'proofs' and 'testimonies' can be easily manipulated and altered to serve a biased view. This offers as a prosperous ground for propaganda.

In this paper we understand propaganda as "the management of collective attitudes by the manipulation of significant symbols" and as such it is recognized as a common tactic for manipulating and reshaping collective memories (Lasswell, 1927). In the virtual world of *EVE*, in-game alliances use such tactics as a political tool in order to increase intra-alliance members' commitment and participation in joint operations or to decrease the enemy's morale and cause them to withdraw. Sources of propaganda include video files distributed via YouTube, comics and political maps, fake images and log files, and numerous posts in the game's forum. The distribution of misinformation through propagandistic tactics influence player's morale but also their collective memory, since some memories are highlighted as important, while others are forgotten. However, propaganda is not the only case of selective remembering.

Cases of selective remembering usually follow traumatic episodes. Such episodes can be a lost war and the unconditional surrender to the enemy, or a traumatic internal affair. Such an episode happened during our research when a member of the corporation with partial access to the corporation's hangar and wallet stole the assets and a large amount of money. Similar cases of theft are common in *EVE*, and there are not integrated security mechanisms to prevent it. All members of the community felt equally responsible, but also betrayed. They encountered issues of trust among the members, especially with newcomers. Nevertheless, the case was quickly forgotten, as it was rarely discussed again. This was mostly a strategic decision made by the community's leadership, in order to dissolve negative emotions that blocked fun and playfulness. It was also done to establish a sense of security and partnerships among the community's members.

By now, it seems evident that the construction of collective memory is a gradual and long process. However, there are cases where the acquisition of collective memory is forced and abused (Ricoeur, 2004). Such forces can stem from within the community's need for change of its collective identity (i.e., the leadership sudden decides to adopt a mercenary type of play) or from the community's environment (i.e., an alliance). Such exogenous forces arise when a corporation in *EVE* decides to join a large alliance. This may result a radical re-alignment of the community's purpose and domain of expertise, since now members have to play for the objectives of the alliance. If change is conceived as radical, some members of the community may decide to leave. For those who stay behind, the participation in the alliance-scale activities will eventually reshape the individual's collective memory and identity.

Results of Our Study

In sum, we identify four major genres of collective knowledge that communities value as collective memory (as an object and as a process): a) *historical archives* of past events, b) *personality checks*, c) *mental schemes*, and d) *repertories of ideas*.

First, *historical archives* refer to documented historical narratives regarding intra or extra-community events that members consider to have an increased significance for the development of the game's history. Through this archiving, a virtual community can document its history, while the negotiation of the meaning of these historical narratives support the construction of the collective memory. Examples include past joint PvP operations, elections for a new leadership scheme, and important decisions made during community meetings. Participation in such events cultivates the sense of someone playing a crucial role in the development of games history and sense of belonging.

Second, *personality checks* refers to memories of individualized actions that affect the collective identity. Such memories serve as 'narrative identities' of the legitimized relations between members of the community, and include attitudes, emotions, and episodes of communicative behaviors especially during conflict reconciling discussions such as those on the topic of rights of ownership (Ricoeur, 1992). Such memories assist members of the community to envision the presence of other members beyond the incompleteness the inherent anonymity of the virtual world (Ward, 1999).

Third, *mental schemes* are also a crucial part of collective memory. These negotiated schemes serve as a stock of shared knowledge to define common sense, ethics, metaphors, and interpretation of symbols (Schutz, 1982). They cultivate the tacit assumption and expectation of a shared world and thus help members to resolve polarization of meanings. Finally, the *repertories of ideas* include future actions and trajectories, learning curriculums of new players, and strategic plans, as well as norms and rules that serve as factors of legitimacy of collective action (Wenger, 1998).

Conclusion

The aim of this study was to explore practices of collective memory construction in virtual communities. The empirical data were mainly based on a longitudinal ethnographic study of virtual communities in two MMOGs. The findings contribute to our understanding of collective memory in general, and in the implications of collective memory construction in persistent virtual environments (i.e., MMOGs) in particular.

We conclude that collective memory is not just a repository of past experiences, but it is rather constructed by social arrangements and is heavily affected by social pressure (Halbwachs, 1992). This means that the process of remembering is done in reference to our identity and other individuals in close social proximity. In an extreme form, we could argue that individual memories are not possible in the absence of references in society. In turn, such collective memories are crucial for the construction of identity of groups such as families, believers of a

religion, or social classes (Halbwachs, 1992). In virtual worlds, the constitution of a collective identity is more difficult than the real world, due to lack of previously known common identification among players (i.e. national identity) but also due the lack of a stock of shared knowledge (Schutz, 1982).

Based on our research, we come to conclude that the constitution of collective memory and identity of a virtual community drastically differentiates from regular communities in the physical reality. This is due to the issues of cultural heterogeneity, the interpretation of the virtual world's reality, the envisioning of other members 'true' identity, and the historical context taking place inside a virtual game world. In order to overcome such obstacles, members of a MMOG virtual community make extensive use of peripheral discussions using metaphors and analogical reasoning, while in order to preserve their collective memory and identity, they instrumentally rely on war stories (historical narratives), cases of personality checks (member and individual roles), and legitimated communicative practices of (propaganda).

In a virtual community, collective memories originate from shared communications about meaning of the past and are encapsulated in routines and repertoires of collective action, as well as in community's symbols of language, culture, and history. Collective memory exists in the medium of its expression and it is gradually constructed through participation of community's member in collective actions, as well as the negotiation of purpose and common goals that such actions serve. Moreover, collective memory is not static but rather situated in the circumstanced reality and remains open to a continuous activity of negotiation of meaning and power.

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