The Virtual Memorial: Temporality, Interactivity, and the Internet

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Résumé

Selon Gregory Ulmer et Shoshana Felman, le monde contemporain serait caractérisé par la multiplication des désastres à grande échelle et des traumatismes vécus de façon collective (l’Holocauste, le 9-Septembre, la pandémique du SIDA, la présente guerre en Iraq, etc.). Le traumatisme serait désormais l’expérience collective la plus communicable entre diverses générations et au-delà des frontières géopolitiques. Faisant écho à ces propos, un nombre important d’œuvres d’art conçues spécifiquement pour l’Internet mettent en lumière les phénomènes associés à la commémoration des tragédies planétaires et des traumatismes collectifs, considérés comme fondamentaux dans la formation des identités et des communautés contemporaines. Ces œuvres, qui adaptent la forme du monument, de l’œuvre commémorative ou du témoignage ne font cependant pas la chronique du désastre. Elles assujettissent plutôt les caractéristiques formelles, techniques et rhétoriques propres à l’art numérique à un projet précis, celui de démontrer l’importance globale de la situation de crise, ainsi que la nature dialectique du traumatisme collectif et du tissu associatif au sein duquel se forme la mémoire. Cet article propose que l’Internet fournit un site idéal pour la création d’un art commémoratif qui s’adresse à des publics délocalisés. Dans ce contexte, les propriétés temporelles et d’interactivité qui sont caractéristiques de l’art numérique invoquent le processus de la mémoire et affranchissent l’activité commémorative du lieu physique et des contraintes géopolitiques qui le sous-tendent.

Our job as artists is not to provide meaning but to offer creative contexts in which new meaning can be built and from which new meaning might emerge. My feeling is that the canon of digital art – our aesthetic values and aspirations – may offer a useful model to civil society as it is confronted with terrorism from within and without its boundaries.

Roy Ascott

Over the past ten years, Gregory Ulmer, professor of English and “electracy” at the University of Florida, has developed an online teaching method centered on “electronic testimony.” Basing his reflection on the work of Shoshana Felman, Ulmer proposes that testimony – originating from trauma – is the discursive mode par excellence today; that our era is defined as the age of testimony. This pedagogic experiment, described in Ulmer’s Electronic Monuments, is rooted in the assumption that trauma (the Holocaust, Chernobyl, the AIDS crisis, 9/11, the 2004 Tsunami, the current war in Iraq ...) is one of the most influential conditions in contemporary society, and that it is the most immediately shared experience across generations and cultures. As long as victims of trauma (those who suffered immediately, as well as those who did not but who nevertheless feel a deep connection) survive, its memory may never be contained. It will be relived and continue to be dispersed in an unrelenting process that aims at healing.

Echoing the conclusion reached by Ulmer, a plethora of artworks made for the Internet are now focusing on trauma, crisis, and tragedy as core issues in the formation of contemporary subjectivities and communities. Taking the form of testimonies, memorials, and monuments, they harness the specific formal, technical, and discursive properties of digital media and the Internet to demonstrate the global importance of this phenomenon, and the dialectical nature of trauma and its remembrance. Instant Memorial (www.fox-gieg.com/installations-memorial.html), for example, a work by Nick Fox-Gieg, goes as far as commemorating, with a simple “We will never forget …,” an infinite number of tragic events that have yet to take place (fig. 1).

While Instant Memorial uses irony to highlight the perversiveness of the memorial impulse, Last Meal Requested (www.e-garde.net/nav2.html#), a virtual memorial by Sachiko Hayashi, takes a more sensitive approach to the issue. It submerges its user in a meditative environment produced by a monotonous “techno” soundtrack and slowly scrolling lines, within which the artist also documents visually and narrates three instances of tragic human loss that have touched and mobilized individuals across the globe: the decimation of the population of the Iraqi Kurdish city of Halabja by Saddam Hussein’s arsenal of chemical weapons in 1988; the lethal beating of Rodney King by Los Angeles police officers in 1991; and the 1999 public execution of a woman in Kabul, ordered by the Taliban religious army (fig. 2). In relation to all these events, petitions were signed, vigils were held in remote locations, impromptu memorials were erected by people with apparently no connection to the victims. The global attention they have garnered testifies to how these tragic deaths have raised issues about human rights and human loss in the broadest sense. Their consequences are therefore conceived as having effects that ripple over – and perhaps even temporarily wash away – geo-political borders. As the placement of Last Meal Requested on the Internet indicates, the public remembrance of these unjustifiable fatalities is considered by Hayashi to be a human responsibility, a wide-ranging necessity, comparable to upholding the memory of the Holocaust, for example.

As the long-standing practice of erecting memorials and undertaking pilgrimages to sites of remembrance suggests, there
is an enduring individual, social, and cultural need to continue bearing witness to events that affect how humanity sees itself and hence inform relationships between its members over time. But the significance of bearing witness is not limited to physical presence in a given memorial site; it also involves temporal notions. Bearing witness serves as the main motivation for the writing of history (the chronological recording of past events) and the shaping of collective memory, which Pierre Nora has defined as a living engagement with the past that involves it in présent practices.

Paradoxically, in this time marked by the mass production and consumption of memory, commemorative practices seem to be relegated to specialized locations and particular events. As Nora has argued, the production of history and collective memory often finds its realization in commemorative sites, or lieux de mémoire. In his analysis, the lieux de mémoire are places where the past is invested by communities with a living desire to remember— with all the implications that this may have for mapping out future directions, or informing collective consciousness. In this sense, lieux de mémoire constitute for their users dynamic and transformative locations.

Although commemoration may happen in a variety of media, the discussion of lieux de mémoire often focuses on a traditional notion of the memorial. In the history of material culture, the memorial usually appears as a three-dimensional object, often a work of art, situated strategically in a publicly accessible site. Built of durable materials such as marble or bronze, it is expected that its meaning— historically determined— will last as long as its presumably immutable form. As communities come together, the public space the memorial inhabits is transformed into an actual lieu de mémoire; it determines an environment that shapes and frames otherwise disparate memories and understandings. In other words, the monument brings together people at a site where they create memory collectively (guided by the memorial representation and various properties of the site), and where, in some cases, competing memories can coexist, mediated by the site.

However, in the past decades the expansion of communica-
tion networks into the World Wide Web, and the emergence of digital cultures, have altered the spatial and temporal parameters of collective experience, and by extension of memorial activities. With new communication environments such as the Internet, public space has become fragmented, serialized, and also strategically (if not universally) accessible. This conceptual shift provides unprecedented potential for rethinking the memorial and the lieu de mémoire.

This is particularly significant as acts of memorialization are directed, more than ever, toward virtual rather than physical communities. In fact, for media theorist Mark Poster, through the Internet, social relationships and the way they form has radically changed: "The issue now is that the machines enable new forms of decentralized dialogue and create new combinations of human-machine assemblages, new individual and collective 'voices,' 'spectres,' 'interactivities,' which are the new building blocks of political formations and groupings." These unfixed and variable collectivities are linked by ideals, convictions, and interests shared in time, rather than in geographical proximity. As a network in constant reconfiguration, the Internet has therefore become one of the privileged sites and modes of exchange for these communities, where members share (even if vicariously) the experiences of other members. These communities constitute the intended publics for many recent memorials (and memorials in progress) that overflow the locality of their origin to remember causes that are understood as having a global importance.

This issue of community brings to the fore the question of accessibility, a question that has garnered much attention in scholarship about the Internet. It is clear that the availability of the necessary technology (determined by economics, geography, and politics) and the knowledge of appropriate languages are significant factors in assessing potential access to the Internet in general and to Internet art in particular. These considerations powerfully challenge the illusion of universal access. Furthermore, establishing a URL does not guarantee traffic to a site.
Edmond Couchot and Norbert Hillaire recently estimated that, with current search engines, at least half of the resources available on the web are practically inaccessible: they are buried deep or are otherwise too difficult to find.8

Yet it is also a fiction that public art in actual space is universally accessible. Indeed, Colette Gaët, an early writer on Internet art, has convincingly argued that while more traditional public art is physically accessible, it also sets up psychological and cultural barriers. Some locations, although free and open to the public, have unacknowledged admission “criteria” of race, gender, or class. “Invisible signs,” she writes, “are everywhere indicating who is welcome to participate and who isn’t.”9

To this issue one should append the matter of nationality and geo-political boundaries that may restrict in a literal way access to “migrant mourners” or “memorial tourists.” This problem of access, in fact, warrants the deterritorialization of memory, liberating the memorial from the geographical imaginations and imperatives evoked by Henri Lefebvre, David Harvey, and Doreen Massey that always link territorialized practices to power relations built into space.10

In this regard, in an age when the local seems to have exploded into myriad fragments, the Internet might therefore provide a platform onto which public art can be deployed specifically for non-localized, interactive, and potentially lasting memorialization.11 Recent Internet art practices showcase this promise by dislocating memorial activity from the site in a traditional sense, and by developing strategies to create direct contact with their users: a sense of “being with,” if not “being there.” Here, artists strive for interactivity as a tangible exchange, a strategy that allows them to bypass the apparent coldness of computer screens and programming languages. Indeed, if many have described the artworks that circulate on the Internet as both u-topic and u-chronic, the specific works that will be examined in the following pages are very much rooted in their medium as a space, a particular temporal framework, and a set of possibilities that include interactivity. They are also linked in time to a point of origin – not necessarily that of their own creation, but rather that of the tragedy they serve to commemorate. The website is therefore understood here as a virtual site, a site irreducible to the coordinates and properties of tangible spaces where three-dimensional monuments exist. In virtual memorials, content, form, and users are bound into a virtual lieu de mémoire and temps de mémoire that would be destroyed if the work was experienced in any other medium or platform. Could this be how the concept of site specificity is reconfigured on the net?

The definition of site specificity that is most often used is the one proposed by Richard Serra in 1989, in relation to his infamous Tilted Arc: “Site-specific works deal with the environmental components of given places … The works become part of the site and restructure both conceptually and perceptually the organization of the site … [D]isplacing the work would amount to its destruction.”12 By opening up this definition to a reflection on digital media and Internet art, one could argue that the virtual memorials discussed below are site specific to the Internet in the way that they use, reconfigure, and depend on the spatial and temporal paradigms offered by the Internet as a site for commemoration.

The Numbers and the Names, a work by Mac Dunlop and Neil Jenkins, accompanied by a visual prologue by Annie Lovejoy (www.hercnorthe.org/11.09.01/thenumbersandthenames.htm), offers a thought provoking point of departure for this reflection. It was developed as part of the international collaborative art project Here nor There. The Numbers and the Names reveals the global pathos of the September 11 tragedy by using not the names of victims, but words related more generally to terrorism or war: history, grief, ashes, pin-pricked map, enemies, friends, tears, and dust. These words are drawn from Dunlop’s poems 11.09.01 and The Numbers and the Names – which are also available on the site. The words float on a colourless screen, in an orbital movement circling a void, using the orbital engine programmed by Jenkins. The order in which the words appear is generated according to an inverse reading of the viewer’s IP address, which appears at the bottom of the screen, and the IP addresses of previous visitors to the site. By dragging the mouse across the screen the user can slow down or reorient the unhurried dance of words. But she cannot stop or overturn the process (fig. 3). This malleable yet irreversible narrative provides an echo of how trauma victims relive the events that marked them. Furthermore, in its collection of IP addresses, this virtual memorial subtly maps a history of mourners who have visited the site in a progressive temporal weaving of poetic and programming languages. Most significantly, it emphasizes how the tragedy has had, and will continue to have, a history of commemoration that extends far beyond the physical perimeter of Ground Zero.

This dispersion of the memorial activity from Ground Zero is crucial; traditional monuments are intrinsically linked to their placement on the land (in the geo-political sense), and their meaning is always influenced by a complex environment that orders memory over time. As a case in point, James Young explains that memorials “suggest themselves as indigenous, even geological outcroppings in a national landscape; in time, such idealized memory grows as natural to the eyes as the landscape in which it stands. Indeed, for memory to do otherwise would be to undermine the very foundations of national legitimacy, of the State’s seemingly natural right to exist.”13 By avoiding the boundaries of physical space and incorporating temporally based interactivity, The Numbers and the Names precludes the jingoistic closure that seems inevitable when a memorial is rooted into
a geo-political site. This delocalization also erases the distance that might otherwise prevent some mourners and “memorial tourists” from bearing witness to the tragedy that occurred in Manhattan.

In “Big Optics,” Paul Virilio mourns new technology’s destruction of distance, geographic grandeur, and the vastness of natural space.14 More specifically, he considers critically the loss of the spatially induced time delay that inserts a moment for reflection between event and reaction. Although this is a fair observation, the undermining of distance produced by *The Numbers and the Names* also plays a positive role in that it can enhance the possibilities of a mourner’s participation in commemoration. It holds the potential of challenging exclusions to the parochialized *lieu de mémoire* that may be based in national and political chauvinisms, or in race, gender, and class. In other words, this new spatio-temporal paradigm allows the subject to visit global sites of remembrance because those sites have broken their traditional relationship to physical place – and the specific principles of inclusion or exclusion that underlie it.

This last point is crucial for the workings of the *Tiananmen Mothers Campaign* web-monument, a site administered by Human Rights China, which hosts a virtual Tiananmen Square (www.fillthesquare.org) (fig. 4). Visitors to the site are encouraged to sign an e-petition requesting the (still-denied) right to mourn peacefully and publicly the untimely deaths of hundreds of young protesters. Each hundred signatures submitted to the site by users engenders a bouquet on the virtual square. On my last visit to the site, 39,470 signatures had been contributed, and close to four hundred virtual bouquets had been stacked over several scrolling pages. In this instance of public commemoration it is the ongoing participation of users that turns the site into a memorial space. Since the victims’ kin have been prevented from building memorials in durable materials or even leaving flowers on the actual Tiananmen Square, the website provides a much needed space for mourning. Here, mourners
can be “present” without accessing an actual place where their security might be compromised.

Similar issues are evoked in Memolog by Tamar Schori (www.memolog.net). This virtual memorial preserves the memory of children, up to the age of fourteen, who have been murdered in various countries during terror attacks that have occurred since the year 2000. Memolog is a virtual quilt generator inspired by another, sadly still expanding, collaborative memorial: the AIDS Quilt. As users interact with the site, a simple grey, red, and blue quilt of memory is unfurled. Each patch is decorated with a symbol drawn from the Phoenician alphabet, a script that evocatively predates and serves as the root for Arabic, Hebrew, and Latin characters. When a patch is activated by the user with a click of the mouse, it is turned into an eight-pointed start (the star of Ishtar, paradoxical symbol of love, war, and fertility), and a photograph of a victim appears, captioned by a short account of the events that led to the loss of the young human life. After seeing eight patches, visitors to the site are asked if they want to introduce additional patches, bearing witness to the death of other children, and hence supplementing the work (fig. 5). The viewer is not only invited to visit, share, and augment the quilt; she is transformed by the work from a viewer into a user, a mourner, an artisan of history, and a traveller. She is made fully aware of the fact that this memorial will, sadly, grow indefinitely through the loss of others.

Joseph and Sylvie Rabic’s A corps et à cris / Over My Dead Body project (www.acorpsetacris.org or www.overmydeadbody.org), a worldwide, online, anti-war demonstration and activist bulletin board, also depends on active collaboration. The unremitting clicking background noise and a number of “click here” banners invite users from all over the world to join an uninterrupted online demonstration as their avatars, photographs, or personal messages parade across a virtual globe. “By participating in this virtual demonstration, we say to those who would compromise people, compromise peace, the planet, but never compromise profit or power, over our dead bodies!” (fig. 6). As
with the Tiananmen Mothers Campaign web monument and Memolog, it only takes a few minutes for the user to join the virtual march, entering the work and transforming it with her presence.\textsuperscript{15}

The potential of such memorials and monuments to grow infinitely and to perpetually occupy virtual space offers a provocative alternative to the physicality of stone and metal monumental art. Of course, the actual longevity of active websites and files archived on the Internet is a purely theoretical issue. Because the works reside in code, activated through media by users, “shelf life” in the virtual world is conditional upon the sustained preservation and/or adaptation of both hardware and software. Yet in spite of the durability of their materials, traditional memorials and monuments become fragile under regimes of repression, or in times of political turmoil, as we have seen with the uprooting of Baghdad’s monument to Saddam Hussein in 2003. In other words, as Fred Forest has argued in 1983 in his pioneering \textit{Manifeste de l’esthétique de la communication}, while the ultimate goal of Internet art is the dissolution of the object into code, the work holds a paradoxical potential of longevity.

This issue of temporality plays out in many different ways in Internet art. Aside from potential longevity, an engagement with time-based interactivity also provides a means for identification and involvement with the work. \textit{Present} (www.diacenter.org/claerbout), a work by David Claerbout, demonstrates this aspect by invoking a potent yet subtle narrative strategy. The work offers the viewer a choice of three flowers to care for: a yellow gerbera, a pink amaryllis, and a red rose. The flower, once downloaded and installed on the computer screen, appears in full, glorious bloom. It sways, moved by a virtual wind and closes its petals at night. Gradually and almost unnoticeably, it progresses to full decay over a week’s time; it withers and dies, leaving a seed to be planted or sent to a friend (figs. 7a, 7b). The natural process of expiration reminds the viewer of the organic cycle of life and, by extension, of mortality, the fragility of life,
and the vanity of existence. This work is indeed a contemporary, digital version of the memento mori (or a botanical Tamagotchi). The transformation of the flower, visible over a period of time, creates a sense of attachment in the user who has chosen and adopted the virtual plant. As the Little Prince said, “[I]t is the time you have wasted for your rose that makes your rose so important.”

In Leçons pour une phénoménologie de la conscience intime du temps, Edmund Husserl describes the phenomenon of identification with time-based art (here, Husserl concentrates on cinema) as a phenomenological issue. Time-based art involves the user in a process because she has to follow in the work a temporal logic that mimics that of her own existence. She is made to be aware of, and to enact mentally, the succession of phases presented in the work.

When it is deployed in the context of a virtual memorial, this temporal affinity that develops in time creates for the user an involvement that nourishes her sense of belonging to a virtual community. Indeed, by tracing her own path through the work, often in real time, the user does more than simply construct her own narrative. She contributes her presence and active memory to the lieu de mémoire. She plays a performative role in the building of an ever-changing, ever-expanding, collective memory. She may also identify with the work and the memory it serves. Here, the structure of the interactive and ever-expanding database is used as a powerful tool and metaphor for the condition of memorialization that evolves over time; in exploring time and interactivity, public memorials on the Internet create unprecedented opportunities for collective remembrance.

Stressing these combined aspects, Presence Forever: Perpetual Communication Machine by Yuri Shutovsky (www.forevermore.com/design/presence) provides symbolic immortality and unending communication for visitors, who are invited to create memorials for themselves. Presence Forever is not meant to be a mute representation, nor does it contain lists of personal data. The emphasis is placed upon the fantasy of eternal
and ubiquitous exchange. In Shutovsky’s work, order forms can be filled out to stuff e-bottles that will carry letters into cyberspace for future connections with absolute strangers. Personal messages can also be sent ad eternam to close ones. One may, for example, have flowers delivered to a grandmother’s grave annually for eternity, or a note can be sent to a grandchild in the year 2103. Users of this feature disappear into their memorial double by switching metaphorically to a medium and temporal framework where memorial interactivity promises to last forever (fig. 8).

As strange as it might seem, this quirky work of art finds commonality with commercial websites that sell virtual “plots” so that families and networks of friends, spread out across the globe, can come together and honour the memory of a loved one without having to “be there.” Parting Wishes (www.partingwishes.com), for example, uses questionnaires to guide users in establishing their memorial preferences. “You are now able to describe what you want to happen when you are no longer able to communicate to your loved ones.” Angels Online (www.angelsonline.com) “is dedicated to the belief that, in this day and age, we should not be limited to honoring our friends and loved ones that have passed away with only traditional methods, such as a spray of flowers, or a printed obituary. Angels Online provides a unique way of spanning the globe to bring friends and family together at one virtual site to honor their loved ones. Time and distances are no longer a problem” (fig. 9).

In Shutovsky’s Presence Forever, the potential “link” to others, and variations on future memories, become the most actual part of the work. Because data files have no closure date, regardless of output or experience in any digital or print medium, a file is always open to supplementation and sharing by eventual users. As Lev Manovich explains, “A new media object is not something fixed once and for all, but something that can exist in different, potentially infinite versions.” Whether this is caused by modularity, expanding content, or random effects is not really important here. What matters is that the true asset of the virtual memorial is located in its delocalized, temporal, and interactive possibilities.

For commemorative art in general, this proposition restores a sense of process. It demonstrates how memory is produced in time through nomadic layering. The culture of immutable truth that once surrounded the sculptural memorial — the traditional hero on the horse, or the fallen angel — begins to fade in favour of a culture of shared, interactive commemoration in any medium. The latter corresponds to a new cultural logic, or a paradigm shift in memorialization. In other words, it redefines the perception of the memorial from being static to being fluid, aligning it with the production of collective memory rather than of history.

But let’s not fool ourselves into thinking that this is an absolute departure from the tradition of the memorial and the monument. Monumental art has always had the ability to mobilize and even manipulate beliefs and memories across space and time. Even when guarded from the world by a plinth, it has always been, to a certain degree, interactive, flexible, or changeable. Sculptural monuments, for example, require the user to move her whole body to experience or discover varying properties of the work in relation to the site, an aspect that is particularly significant for the many recent monuments that are site-specific. The user is also often expected to engage in ritual deeds to activate the work: actions such as laying flowers, or reading names and dates. In this sense, works such as Brancusi’s Endless Column at Tirgu Jiu (1938) or Maya Lin’s Vietnam Veterans Memorial (1982) already translate very well the heuristics of memorialization that link them to the dialectical production of collective memory.

Furthermore, contemporary theory on commemorative art
increasingly considers the memorial as a site of remembrance that constantly remediates memory instead of succeeding in fixing any version of historical "truth" into a given site. Scholars such as Rosalyn Deutsche, Andreas Huyssen, Miwon Kwon, and Samir Al-Khalil, for example, understand memorials as works that contain inherently unstable meaning. In The Texture of Memory, James Young contributes to this discussion by explaining how, once created, memorials take on lives of their own. They might resist original intentions, or actually change meaning over time as new contexts and circumstances emerge—and thus new readings by their users become possible. "The capacity for change has not always been so apparent, however. For, traditionally, the monument has been defined as that which by its seemingly land-anchored permanence could also guarantee the permanence of a particular idea or memory attached to it."19 The monuments to socialist leaders that once stood behind the iron curtain exemplify this point perfectly. During the past two decades, many such works have been toppled, extracted from their intended locations, and then re-erected in outdoor museums of political culture. They have thus been reinvested with a new (liberal or "post-socialist") political and cultural narrative.

Strategies that involve interactivity, change, and hence a deliberate temporal dimension have also been deployed by contemporary artists who produce on-site memorials. Some of the most pertinent examples that attempt to get away from the monumentalization of tragedy by using temporal and interactive strategies fit into the tradition of "gardens of reflection" (such as Marker of Change by Beth Alber, 1997, a memorial located in Vancouver, dedicated to the 6 December 1989 massacre of fourteen young women at the École Polytechnique de Montréal), or what James Young terms the countermonument.20 Harburg's Monument Against Fascism (1986–91), a counter-monument by Jochen Gerz and Esther Shalev-Gerz, for example, was designed to engage German people in a reflection about the current understanding of human loss that occurred
under the Nazi regime. In Harburg, users were asked to interact with the monument, inscribing with a steel-pointed stylus their names and thoughts on the lead-plated aluminium column. Over the course of several years, users' interaction with the work revealed the extreme complexity and polyglossia of this particular theme in a specific context and time. As the base of the column filled up with signatures and graffiti, the column was gradually sunk into the ground.

Along the lines of postmodern conceptions of trauma and its commemoration, all these instances of public memorialization avoid staging homogenized or seemingly immutable memorial representations. Instead, they display the process of memory. Yet, relying on the new possibilities afforded by digital media and the Internet, virtual memorials seem to push even further the understanding of the memorial and of collective memory as malleable over time. If Harburg's *Monument Against Fascism* placed innovative cognitive and physical demands on its users and literally recorded their presence, the column, which is now underground, acts simply as a time capsule. Conversely, Mac Dunlop's *The Numbers and the Names*, Tamar Schori's *Memolog*, and Joseph and Sylvie Rabie's *Over My Dead Body* hold the potential of everlasting interactivity. These works transform the viewer into a full-fledged user in a way that reminds one of Roland Barthes's notion of the "writerly text."21 The user invests the virtual monument with her memory precisely because she is given agency to act upon it.

The Internet is now brimming with memorials that are constituted of lists of victims and testimonies from their families, as well as anti-war monuments that describe figuratively or graphically human fatalities caused by war.22 But the virtual memorials and monuments presented here are not straightforward descriptions of events. Neither are they iconic or symbolic representations of the actual tragedies they are meant to commemorate. Instead, they focus on the process of memory, ac-
knowing that the most promising means for memorials on the Internet is rooted in the net's temporal properties and interactivity. Memory is no longer expected to flow from the memorial to the viewer. Instead, it is enacted in a virtual community's participation in the memorial activity – through a will to remember. As Internet artist Roy Ascott explained, by creating creative contexts rather than objects the emerging aesthetic canon of Internet art lends itself well to community-building, a role particularly important in the post-9/11 world. This process, which challenges traditional ideas about authorship and meaning in art, invokes Nora's notion of the lieu de mémoire, as the site where history is willingly retrieved by a public that seeks and activates it, therefore transforming it into living memory. In this sense, the virtual memorial holds the potential of externalizing and making tangible the memorial operation as it takes place in time and through a meaningful and productive connection with and between users. The collaborative practice of remembering becomes the focus of the work; the virtual memorial reminds us that memory constitutes an active process shared within a community, that while we actively engage with it, we stand a chance not to forget.

Notes

1 An earlier version of this paper was presented under the title "The Four-dimensional Monument" at the Comité international d'histoire de l'art (CIHA) conference in Montréal in 2004.


3 For Ulmer, 'electracy' is to the digital image apparatus what literacy is to alphabetic print. See Gregory Ulmer, Eletonic Monuments (Minneapolis, 2005).

4 The three genres overlap. Testimonies are most often first-person accounts of a tragedy, memorials tend to commemorate losses and to promote healing, while monuments also commemorate events, but most often through a celebratory or utopian language. Testimonies, memorials, and monuments all serve to mediate memory. Indeed, Arthur Danto has written that "we erect monuments so that we shall always remember and we build memorials so that we shall never forget." Arthur Danto, "The Vietnam Veterans Memorial," The Nation 31 (August 1986), 152.

5 For a history of art on the Internet, see Rachel Greene, Internet Art (New York, 2004). Greene focuses particularly on the anti-institutional and nonconformist aspects of Internet art, and on the artistic communities that have emerged on the Internet over the past decades.


8 Edmond Couchot and Norbert Hillaire, L'Art numérique: comment la technologie vient au monde de l'art (Paris, 2003), 251.


10 See Henri Lefebvre, The Production of Space (London, 1991); David Harvey, Space of Capital (London, 2002); and Doreen Massey, Space, Place and Gender (Minneapolis, 1994).

11 In the past, the historical storage of culture took place in archives, museums, books, and monuments of all kinds. As large-scale "memory projects" such as Canada's online archival database (www.collectionscanada.ca) demonstrate, much historical and memorial information is being transferred to the Internet, where people can access it at their convenience from their computers. In this sense, the net provides access to a type of memory in which each user reconstructs and reorganizes memory according to personal imperatives. The Internet also offers its users the possibility of adding their own memories to the existing collections of information, contributing to an ever-growing shared heritage. This in itself seems to have the potential to dramatically extend the possibilities of the conservation and circulation of memory.


15 The original online demonstration was launched in 2002 under the title Enfants d'immigrés (www.enfants-dimmigres.org). It urged French citizens to join in protest against Jean-Marie Le Pen's Front National party and its racist politics in the context of the 2002 presidential elections. This Internet artwork might have opened the way for "non-art" sites that have recently come under criticism for promoting effortless activism on the net. The Petition Site (www.thepetitionsite.com, launched in 2006), for example, alleviates an extreme activist duties and practices: seeking information, debating issues, creating public awareness through marches and other strategies. The site, which claims to collect 10,000 signatures daily, classifies petitions according to categories for easy "one-stop shopping." It even highlights a "petition of the day." The Petition Site further offers "new activist tools," which "can edit and manage your petition through a simple dashboard. Manage your existing petitions or create a new petition today!"


19 See Rosalyn Deutsche, Fixations: Art and Spatial Politics (Cambridge, Mass., 1996); Andreas Huyssen, "Monument and Memory in a Postmodern Age," The Yale Journal of Criticism: Interpretation in the Humanities 6, no. 2 (Fall 1993), 249–62; Miwon Kwon, One Place after Another: Site-Specific Art and Locational Identity (Cambridge, Mass., 2002); Samir Al-Khalil, Monument: Art, Vulgarity, and Responsibility in Iraq (Berkeley, 1991); and Young, The Texture of Memory, 3.
20 James Young describes countermonuments as contemporary memorial works that do not aim not to console mourners, but to provoke them into questioning the social and cultural production of memory itself. One of the main strategies adopted by countermonuments, according to Young, is to avoid being static. They change over time in both form and meaning. See Young, The Texture of Memory, 27-48.


22 See, for example, the alphabetized list of American and British casualties in the Iraq War Memorial Online (www.iraqwar-memorial.com), or an animated visualization locating in (geographical) space and time the military casualties incurred in Iraq by the coalition troops from the beginning of the war to the present in Iraq War Coalition Fatalities (www.obleek.com/iraq).