Paper from the Conference "INTER: A European Cultural Studies Conference in Sweden", organised by the Advanced Cultural Studies Institute of Sweden (ACSIS) in Norrköping 11-13 June 2007. Conference Proceedings published by Linköping University Electronic Press at www.ep.liu.se/ecp/025/.

The Immensity within the Minute: Forging Digital Space

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The Internet is shaped through metaphors into spaces that have their counterparts in the "real" world such as the global city, superhighway or library. Although the generation of online space can be produced by lived embodied practices as users download or upload videos, read and write texts and create and view images, the production of space in this context is primarily phenomenological, produced through the imagination of its users. This paper argues that the Internet resembles the "real" world yet in miniature. A key facet of miniaturization applied to the creation of virtual space is that enclosed within the tiny is the immense. Consequently, by virtue of the imagination of its users, the boundary between large and small dissolves: contained within the miniature controlled world of a computer screen is a vast sphere of seemingly endless possibility. This research builds upon a central concern in cyberculture studies of whether the Internet is a locus of control or freedom, while incorporating an array of fields and disciplines beyond media studies namely philosophy, literary theory, cultural theory and linguistics.

The Immensity within the Minute: Forging Digital Space

"Miniature," writes Gaston Bachelard, "is one of the refuges of greatness" (Bachelard 1958: 155). Enclosed within worlds rendered small through literary means lie gigantic realms forged through the play of language and imagination. What comes to mind when we think of miniatures is probably a collection of mundane and extraordinary objects and places rather than Bachelard's vision of how the grand emerges from the tiny. The world of the miniature is largely the realm of tourism. National and urban landmarks are remodeled into miniature souvenirs or featured in diminutive forms in theme parks. Strolling through tourists shops on Istiklal in Istanbul, for instance, one can find snow-shaker glass baubles holding tiny replicas of the city's celebrated mosques and palaces. Moreover, the splendour of Turkey is captured in the scaled-down park known as Miniatürk, where on display along the scenic golden horn are models of notable historic sites that span Istanbul, Anatolia and the former Ottoman provinces. Miniature worlds designed primarily as tourist attractions abound throughout the globe, offering minute copies of nations, as in the case with Miniatürk, or the entire world, the aim of the Tobu World Square in Japan. Miniaturization is also part of the everyday world of the child; toys and dollhouses, the stuff of childhood, offer reduced and distorted versions of the material world. Commonly associated with domesticity, and the home, miniatures are further relegated to the sphere of the feminine, the delicate and the petite. Nonetheless, with the rise in microtechnology, miniaturization has undergone a metamorphosis. The mechanisms of reduction have transformed military weapons such as cruise missiles and everyday information gadgets – mobiles phones and laptops – into powerful machines. Commenting on how technology has altered the status of the tiny in the contemporary context, Donna Haraway writes, "Minaturization has turned out to be about power" (Haraway 2000: 294). She adds that, "the old fascination of little Anglo Saxon Victorian girls with doll's houses, women's enforced attention to the small, take on quite new dimension in this world" (295). Not only has technology rendered machines littler and potentially more forceful, but the virtual worlds that have become accessible through the Internet and computer technology, as I argue in this paper, are also *miniatures*. I will further show that the Internet as a space in miniature illuminates how cyberspace can be at once a site of control and dominance as well as lack of mastery and potential chaos. Before beginning, I would just like to note that the terms "cyberspace" and "Internet" are used interchangeably even though they are not exactly equivalent. "Cyberspace" describes the world that consists of machines, data and users, whereas "Internet" simply refers to the machines, the network of computers. Cyberspace is often regarded as synonymous with the Internet, as well as with the web and virtual reality (Brooker 2003: 64, 144).

For the Internet to be a world in miniature, it must first be visualized and experienced as a space (Pietrobruno 2006: 211-212). How does it become a space? One of the ways is through the deployment of metaphors. Spatial metaphors that have been used to comprehend the Internet have transformed this assembly of computers into a realm. We project through metaphorical processes our physical conceptualization of space onto cyberspace, and in turn real-space perceptions are being transposed into virtual expanse. Consequently, the Internet assumes through numerous metaphors countless shapes that have their counterparts in the physical world, such as the global city, information superhighway, library, bookstore, shopping mall and boulevard. The tendency to view this network as a realm in terms of real-world experiences further emerges through the usage of language steeped in spatial significance: surf the web, move from one site to the next, enter or visit sites, enter passwords, access homepages, hang out in chatrooms, roam around dungeons and domains, navigate and trespass (Hunter 2003: 7, 16).

The impulse to conceptualize in metaphors is not unique to digital technology. The linguist George Lakoff and the philosopher Mark Johnson argue on linguistic grounds that metaphors underlie most of our ordinary conceptual systems, such as thought processes and the nature of experiences. Generally, we are unaware of how profoundly metaphors structure our conceptual universe. For instance, in citing the example of how arguments are conceived in the English language as a battle, they illustrate how this correlation between arguments and war influences the character of arguments themselves and structures how they are performed (Lakoff and Johnson 1980: 4). Through these metaphors, arguments become a battlefield in which there are opponents who win and lose, attack and defend their claims, gain and lose ground, demolish their adversaries, strengthen their positions and get wiped out. Furthermore, metaphors enable us to forge space. Just as spatial metaphors render the intangible realm of the Internet as a concrete space, metaphors, according to Lakoff and Johnson, also structure the physical world by rendering it distinct and confined even when it may not consist of clear borders. They write, "Human purposes typically require us to impose artificial boundaries that make physical phenomenon discrete just as we are: entities bounded by surface" (25). The indistinct becomes contained through language. The visual field, for instance, transforms into a receptacle through the word "field" itself as well as through the prepositions we use to speak about it: expressions such as "to have something in sight" or "out of sight" give the impression that we can enter a visual space which holds the objects that we see within it (30). The idea that the visual field becomes a vessel through metaphors can be applied to the Internet. The metaphors that we use to access the Internet, which we experience primarily as a visual and aural medium, transform this borderless virtual sphere into a container. The common expressions to get "online" and "offline," for instance, convey the idea of entering and leaving an enclosed moving space.

The metaphors we use both in the real and virtual worlds not only frame our perceptions but can also affect our actions and experiences. More precisely, in light of the writings of George Lakoff and Max Black (Black 1993), Dan Hunter shows how metaphors help to determine the kinds of outcomes we can anticipate and presume (Hunter 2003: 16). Consequently, spatial metaphors of both the real and the virtual have concrete effects that materialize and corporealize. Hunter, for instance, illustrates how the metaphor of cyberspace as a place, has led to the application to the Internet of real-world criminal law, torts and constitutional law pertaining to issues of property (3). This has enabled the Internet to be regarded as property just as places become property through law in the real world. Hunter identifies what he terms the "Cyberspace Enclosure Movement," in which laws are being used to increasingly privatize the Internet into cyberholdings (30). The consequence of the cyberspace-as-place metaphor, he laments, is the eventual erosion of the Internet as a digital commons, as privatization will be increasingly facilitated by legal means (30). The metaphor of place that has been projected onto the Internet has significantly determined the real-world deployment of this technology.

Cyberspace as a place could be viewed as one of the many metaphors contained within the range of spatial terms that are cast onto the Internet. Place is commonly used in the geographic sense to denote location. It is also defined in cultural theory as a space to which signification is attributed (Carter et al. 1993: vii). It is in places that we develop our sense of identity as developed through symbolic or psychical associations. Place more often than not conveys the sense of home (Sarup 1996). The metaphor of cyberspace as a place, on which Hunter's work is based, refers more to the definition of place as a geographic location. Consequently, this metaphor enables the Internet to be carved into pieces, distributed and owned, making it similar to the property of the real world, which is associated with actual earth-bound locales. On the other hand, the concept of space is not bounded by stable and rigid borders, as are places transformed into property. Space, furthermore, is not a finite,

uniform, vacant container in which individuals and things are placed. Rather, it is infused with metaphors that in turn mould spaces. Space (both within the real and virtual realms) can take shape through the figurative use of language and, as Bachelard has shown, through the processes of the imagination (Bachelard 1958). As Michel Foucault writes, "Bachelard's monumental work and the descriptions of phenomenologists have taught us that we do not live in a homogeneous and empty space, but on the contrary in a space thoroughly imbued with quantities and perhaps thoroughly fantasmatic as well"(Foucault 1984: 231).

Although metaphors have transformed the Internet into varied imagined spaces that have their equivalents in actuality, I would add that these virtual spaces share the attribute of being miniatures. The miniaturization of the Internet is produced through a combination of the material and the imagined. The user enters the Internet, so to speak, via the computer screen. At any given time, the only part of the Internet to which users have access is what appears there on the screen in front of them. Consequently, the virtual sphere is tiny in relation to the realspace world that surrounds users such as their actual neighbourhoods, cities, nations or the globe. The size of the virtual world is limited to the actual physical dimensions of the machine. Users can hold this sphere in their hands. As the human body, according to Susan Stewart, has provided our essential means of apprehending and beholding scale (Stewart 1993: 101), the criteria for what constitutes a miniature is also judged in relation to our bodies. The virtual world of the Internet is a tiny realm that we can capture with our eyes and span with our hands. Although the space of the Internet is diminutive through the actual physical size of the computer screen, the transformation of this flat surface into an immense realm is produced by the workings of the imagination. By integrating the philosophy of Gaston Bachelard, I will show how the conceptualization of the Internet as miniature – produced through the fusion of the material size of the screen and imagined projections of the user – brings forth perceptions that reflect pervasive yet contradictory social values that have been bestowed upon the Internet: this virtual sphere enables its users to enter a realm either of control or lack of control or possibly one offering a combination of the two.

How can the Internet, which comprises a gigantic realm of hypertexts and hypermedia, be regarded as miniature? The vastness of cyberspace does not make it any less diminutive. Immensity, according to Gaston Bachelard, is enclosed within the realm of the miniature. Bachelard's ideas concerning miniaturization are part of his theory of space expounded upon in his luminous work *The Poetics of Space.* He integrates a phenomenological approach by envisioning intimate spaces as produced and reshaped through the workings of the imagination. The objective space of a house, for instance – its corners, corridors, cellars and rooms – is less important than how it is transformed through the imagination, a process that resembles the creation of poetry. The childhood home, for example, becomes imbued with figurative meaning that recasts its concrete objective reality. Depending on the emotions and rational faculties of its dwellers, a home can become a place of joy, fear, delight, sadness or magic. The metamorphosis of our first homes through the workings of the imagination renders us all poets (Bachelard 1958: 6). As we daydream of our childhood homes, the images that we find in the recesses of our minds are the ones that we have forged through the poetic processes of our imaginations, not those of the concrete real space (5, 6). But for Bachelard, the space perceived as an objective entity and that transformed by the workings of the imagination are equally real. He writes, "I myself consider literary documents as *realities of the imagination*, pure products of the imagination. And why should the actions of the imagination not be as real as those of perception?" (158, original emphasis).

Gaston Bachelard further explores the intimate space of the miniature. Immensity, according to him, is contained within its realm. To demonstrate how the minuscule and the vast are harmonious in thought, he provides a simple but cogent illustration. When one looks out at the horizon, distance creates miniatures. The miniatures on the horizon are not actually

minute but become tiny through the mind's eye. The imagination captures this immensity and reduces it to a little world that can be more easily possessed, controlled and dominated (Bachelard 1958: 173). As Bachelard writes, "In distant miniatures, disparate things become reconciled. They then offer themselves for our 'possession,' while denying the distance that created them. We possess from afar, and how peacefully!" (172). Through the process of rendering the physical world small so that it can be better possessed, values become both compressed and enhanced in the miniature. To understand how immensity is contained within the small, one must go beyond the logic of "platonic dialectics," which distinguishes large from miniscule, to the "dynamic virtue of miniature thinking," which enables the imagination to encounter the massive within the little (150).

The philosophy of Bachelard pertains to the virtual sphere of the Internet. For users, who are secluded in their homes or offices, to envision themselves linked to an immense universe, they need to produce this space by permeating it with images that recast it as a virtual sphere. The separate webpage that the user is viewing becomes a part of a gigantic realm. In light of the ideas of Bachelard, vastness becomes contained within the miniature space of the webpage through the workings of the imagination. The imaginations of users enclose a virtual realm within the diminutive locus of the computer or laptop screen. Moreover, this immense world in turn becomes small through its accessibility by being virtually at the fingertips of its users, which further renders it tamed and controllable. Horrendous and seemingly chaotic events of the "real world," for instance, can be captured on the Internet, where their containment in this online space seems to render them more manageable. Since the hanging of former Iraqi dictator Saddam Hussein on 30 December 2006, videos of this execution, for example, have been featured on the Internet ("Unedited Saddam Hanging Video," 2007). Although these gruesome video images, replayed after the actual hanging, allow viewers to relive the barbarity and brutality of the event, their horror is somehow diminished through the presence of these images within the diminutive sphere of the online video, which can be controlled and manipulated by users. The Internet as a virtual global realm, with all its horrors and delights, is produced and managed through the imagination of its users, who envision its grandeur from the miniscule space of their computer screens. Just as Bachelard's vision of the miniature collapses the boundary between small and immense, Internet users enclose the gigantic realm of the Internet within the minute space of their computer screens. As they move between the large and the small, the social values projected onto the Internet also transform: the Internet becomes both a space of control and mastery via the screen and a place of potential chaos and disorder, as exemplified by the vastness of the potentially unknown imagined Internet space.

Although individuals are involved in constructing virtual space through the workings of the imagination, recent critical research has begun to view the deployment of the imagination as possibly being collective. Arjun Appadurai observes how the mechanisms that underlie the processes of globalization – media and migration – exert a paired effect on the imagination, producing imagined selves and imagined worlds (Appadurai 1996: 3). With the technological developments that have occurred over the past century, the imagination in recent times has metamorphosed in Appadurai's vision into "a collective social fact" (5). The imagination, within the contemporary context, is no longer confined to the spheres of art, myth and ritual but is an essential part of the daily mental work of ordinary people (4). In light of the link between imagination and technology, virtuality then becomes not an inherent feature of the Internet but a social accomplishment (Miller and Slater 2000: 6) that is brought about through the collective deployment of imagination. The imagination enables users dispersed throughout the globe to forge a collection of computers into a virtual space and to envision the single pages of their computer screens as parts of a gigantic realm that acquires diverse shapes in

accordance with the circulation of spatial metaphors such as global city, superhighway and library.

This consideration of the Internet as a miniature that gives rise to both control and lack of mastery counters the dominant perspective in cyberculture studies that the Internet is uncontrolled. The Internet is largely perceived to be self-governing because it is not regulated by a centralized and hierarchical order (Lévy 2001: 91). Cyberspace is frequently described as rhizomatic in light of Deleuze and Guattari's concept of the rhizome, which models the structure of decentered political and intellectual universes that oppose the traditional "arborescent" model of Western thought built on hierarchies and binary oppositions (Deleuze and Guattari 1987). According to Alexander R. Galloway, a closer examination of the actual machines that comprise the Internet protocol reveals how the perception of the Internet as merely chaotic and uncontrolled is indeed a myth. Computer protocols govern how specific technologies are agreed to, adopted, implemented and ultimately used by people around the world, taking into account issues of logic and physics (Galloway 2004: 7). He sets out to explain the way protocol is founded on a *contradiction* between two contrary machines. The first machine, the uncontrollable network, which comprises the Transmission Control Protocol (TCP) and the Internet Protocol (IP), fundamentally dispenses control into independent locales. The TCP and IP are ungovernable. These are the protocols that convey the idea that the Internet is a free space that resists control and hierarchies. The TCP and IP are the principal protocols responsible for actually transmitting data between computers within the network. The TCP and IP function in unison to set up connections between computers and to transmit data through these connections. The design of the TCP and IP, which enables any computer on the network to communicate with any other, is responsible for creating a nonhierarchical transmission of information (Galloway 2004: 8). The second machine, the Domain Name System (DNS), distributes control into firmly defined hierarchies. The DNS, which is constructed like an upturned tree, is an extensive decentralized database that connects network addresses to network names. The root servers at the head of this upturned tree totally control the existence of each lower branch without automatically determining the content of each one (8-9). Consequently, Galloway notes, "The Internet is a delicate dance between control and freedom" (75).

My analysis of the miniature digital sphere also envisions the Internet as a play between control and lack of control, potentially verging on chaos and disorder. A fundamental difference is of course apparent between Galloway's understanding of this dance between control and freedom and my own. Galloway's analysis is based on the workings of a machine, not on the imagination and the metaphors of space. Furthermore, the mastery to which I have been alluding is the sense of the power that users can attain from the micro command post of the computer screen, which is continuously being eroded as they become submerged and overwhelmed by the gigantic perceived disorder of cyberspace. On the other hand, Galloway's reference to the relation between control and freedom that lies at the core of the network is the physical reality of the actual machine, not an imagined sensation. For certain theorists who focus on the Internet as a machine, an analysis that does not consider its physical structure lacks solidity. According to Eugene Thacker, who wrote the foreword to Galloway's book *Protocol: How Control Exists after Decentralization*, a key point that Galloway makes is that "networks are not metaphors" (Thacker 2004: xiii). Galloway's concept of protocol is intended to demonstrate the nonmetaphorical nature of networks. Networks are, according to Thacker, "material technologies, sites of various practices, actions and movements" (xiii). The tendency on the part of cyberculture theorists to analyze networks as metaphors rather than take into consideration the material structure of the Internet is for him "vapour theory" (xiii). Vapour theory, according to Galloway, passes over the computer itself and addresses the information society, as I have just done, in light of metaphors and the

workings of the mind (Galloway 2004: 17). Just as the word "vapour" connotes the insubstantial, this research on the miniature and its connection to online space could be considered merely trivial and meaningless in regards to more serious work conducted on Internet technology. At the same time, the Internet as a machine may have far less impact on users as compared to the metaphors that materialize and corporealize it into spaces. Users are for the most part not aware of the physical reality that structures the Internet. Tim Berners-Lee, the inventor of the worldwide web, writes that "The job of computers and networks is to get out of the way, to not be seen … The technology should be transparent, so we interact with it intuitively" (quoted in Galloway 2004: 65; Berners-Lee 1999: 159). Galloway likens this concealment of the inner workings of the Internet to other phenomena in which the apparatus of production remains hidden: the classic Hollywood film that masks continuity editing or the commodity that removes the process of production (Galloway 2004: 65). Because the machinery of the Internet protocol remains basically invisible to users, we grasp cyberspace in terms of the imaginary worlds we cast upon it, universes that I have argued are miniatures. The Internet as a space in miniature is therefore grounded in the workings of the imagination fueled by metaphors.

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