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TECHNICAL MEDIATION, SOCIAL ACCELERATION
AND THE POLITICS OF HYPERMODERNITY

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ABSTRACT

This project aims to describe the political implications of an emergent phenomenon that I call “hypermodernity.” The primary assumption throughout this project is that the spread of electronic communication and surveillance techniques carries with it unique political significance when human-technological interactions are bounded spatially. Through an inductive investigation of specific technological spaces, I propose a form of social and political practice in which the spatial and technological have become inseparable, simultaneously united and problematized through the concept of information circulation. I call the proliferation of spaces predicated on the circulation of information hypermodernity. Rather than focusing on the “construction” of these spaces (the construction of “meaning” of the space), this project aims to describe the spatial and temporal experiences that are made possible (or restricted) by the relationship between humans and technology in spaces dominated by information flows.

In later chapters, I detail a series of empirical examples found in commercial airports. Using a Heideggerean phenomenological method, I analyze full-body scanners and biometric identification documents and how these technological systems intertwine human bodies, technological capabilities and spatial practices. From these observations, I build an inductive theory of the hypermodern and its corresponding instrumental rational worldview.
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Ch. 1 Introduction: Hypermodernity

The focus of this project is what I call “hypermodernity.” This investigation is a theoretical attempt to describe a set of increasingly common technological conditions in post-industrial urban and suburban society that allow, but also direct, the average person to be actively engaged in day to day life. The study of hypermodernity, as I frame it, is always the study of technology. Or, more specifically, it is the study of technological networks whose primary function is to circulate, not simply represent, information. I argue that this phenomenon that I call “habitable circulation” forms a unique set of conditions of possible engagement with the world. The technical conditions that generate hypermodern experience make possible a certain form of political engagement with the world. The hypermodern is characterized both by the types of technologies that connect spaces and also by the types of connected spaces that these technologies create. In a dialectical sense, the hypermodern is both a type of space that emerges and simultaneously the technical interconnectivity that makes the existence of that space possible. (Merrifield, 1993, p. 522) The first question one is likely to ask is “What and when is the hypermodern?” This question wonders how a historical era (the hypermodern), which one may assume encompasses countless events and the proliferation of various thoughts and practices, can be reduced to the study of the technological infrastructure of that era. This question is misguided since I don’t define hypermodernity as a time period or a historical era. To this question, I answer that the study of technological conditions of daily habits allows me to describe the emergence of “technological spaces” (which are both spatially bound and temporally extensive) and to form a technologized interpretation of human behavior that occurs in and between such spaces. But, rather than focusing on the “construction” of these spaces (the

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1 I am using the term “habitable circulation” in a similar sense as Benjamin Bratton used in his introductory chapter to Paul Virilio’s *Speed and Politics*. (2006) Though it is important to note that my use of “habitable” is meant to convey practical engagement in the electronic world, rather than a location for a hypermodern subject.
construction of “meaning” of the space), this project aims to describe the spatial and temporal experiences that are made possible (or restricted) by the relationship between humans and technology in spaces dominated by information flows.

These information spaces are obviously limited in number as technology, in the sense of artifacts, is not everywhere, all the time. Technical hardware doesn’t act to circulate information in all contemporary spaces. Furthermore, not all technological artifacts are equally influential. A television can totally dominate a room by organizing attention and furniture layout towards it, and can create a certain mood through its programming. Meanwhile, a cup may sit by totally unnoticed. However, certain spaces (and certain social modes of spatial organization), unique to hypermodernity, are becoming increasingly common. These spaces are not dominated by any one particular technological object. Rather, these spaces are defined by the circulation of information, often relying on the presence of a person to provide the source for information gathering. The person, of course, provides information by taking on a social identity of a consumer, a traveler, a worker. The defining characteristic of the hypermodern is the proliferation of these types of spaces and, through electronic transmission, the way that these spaces are becoming constantly connected to one another through the speed of information. I argue a certain type of technological condition emerges that frames citizen activity in certain ways. The objective of this dissertation is to describe hypermodernity as an emergent phenomenon (not a historical period) of the proliferation of highly technical, digitized, interconnected, interactive spaces. As these spaces become more common, they increasingly constitute the (often unnoticed) conditions of possibility of many daily habits.

To reiterate, my approach to the study of hypermodernity is necessarily a study of modern technology. To study the spaces of hypermodern life means to study both the people and
the technical objects that co-exist in social spaces, the way that they are brought into contact with each other and the conditions of possible action that emerge from these interactions. But, the “space” of hypermodernity is not defined by its geographical or physical dimensions. Rather, the “space” in question is defined by the conditions of possibility that are generated by the human-technical interaction within a physical infrastructure. Hypermodernity, therefore, isn’t an era of time, nor is it a type of space. Hypermodernity is a mode of existing in the world, a certain type of condition generated, which manifests itself in particular temporal and spatial ways. It is crucial to remember that the conditions of hypermodernity are not universal, and they are not globally extensive or temporally ubiquitous. Since the hypermodern condition is generated by particular forms of techno-circulation, a space that is not hypermodern today can become hypermodern tomorrow. This all depends on the change of information flows and technical hardware that occupy an area, the legal rules and political customs that intersect in the space, the number of human subjects that pass through the space and the technical procedures that govern the space. The intensity (the level of technical connectivity) of the hypermodern experience is generated by the technical and social reproduction of the space itself, not imposed upon by external social structures or social norms (these structures and norms do play a part in the (re)production of the space). The spatialized practices of the hypermodern can be more or less intense over time, but they do not define our current historical era.

To theorize the hypermodern is an effort to bring forth a clearer understanding of the consequences of certain contemporary forms of human-technical interactions. The analysis of these interactions is an exceedingly broad project. Therefore, in order to bring out the most salient aspects of this phenomenon and to show its political importance I will focus on certain sites that exemplify the main features of this emerging mode of experience. For this reason, I
repeatedly draw on the experience of travelers at contemporary, large scale, commercial airports found in virtually every industrialized country. I think airports are the perfect example of a hypermodern technological space and I repeatedly draw on airport examples to demonstrate the existence of a uniquely hypermodern set of conditions of social action. Moreover, airports are a stark example of the ways in which the hypermodern is not universal, but particular and contingent. The singular event of 9/11 led to the creation of the Transportation Security Administration, the introduction of new rules and regulations, the implementation of new technologies and surveillance, and the introduction of new passenger requirements and documentation. Obviously, the physical space of most U.S. airports predates 9/11, yet the hypermodernity of the space is a result of technological and informational stipulations, not a change in the physical space. The technological devices that epitomizes the circulation of information more than any other are the millimeter wave and backscatter full-body scanners that are now in use in airports. Yet, these devices have come under immense public scrutiny and protest and are currently at the center of a lawsuit being brought against the TSA. Should these devices be removed from airports and their use restricted, the “intensity” of the passengers’ technological experience will be lessened, but the historical era of post-9/11 life remains as intense as ever. This demonstrates that the practices involved in hypermodern settings are not necessarily tied to an era of political attitudes, but much more closely tied to the current stage of technological attitudes and spatialized habits.

My approach can be understood as an inductive methodology which treats airports, security, and surveillance as indicative of the general emergence of hypermodern culture. For instance, from late December 2009 through spring 2010, there were countless news articles covering the various pros and cons of installing full-body scanners at U.S. airports. The major

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2 http://epic.org/privacy/body_scanners/epic_v_dhsSuspension_of_body.html
concerns involve cost, decreased efficiency, passenger privacy and the uncertainty of efficacy of these machines. These debates were largely set off by the U.S. efforts to introduce the technology more widely after a failed bomb attempt on board a Detroit bound airliner on Christmas Day, 2009. While the characterization of these new full-body scanners as a response to an extreme situation is the popular justification among politicians, I argue that this must also be thought of as a manifestation of the intersection of political power and technological rationality (the instrumental desire to conquer the uncertainty of human bodies as information sources) in the form of new hypermodern spaces. Airports are a paradigmatic example of what I am talking about when I describe the emergence of a hypermodern, technological space. The phenomenon of hypermodernity is much broader, but I think it is possible to articulate a viable theoretical thesis about hypermodernity by establishing an empirical foothold in the example of airports.

My project has several goals. First, it aims to describe the phenomenon of hypermodernity from the point of view of both the individual (traveler) and from the vantage of socio-technical structures (airports). It is the rendered interaction between human and technical structure that both structures and perpetuates the flow of political information, and this flow is simultaneously implicated in the determination of the scope of technological space(s). Secondly, I demonstrate that the collection of information occurs locally but is disseminated across great distances. This, in turn, creates a two-fold condition of experience for the individual traveler. This dual level of experience (local, instrumental on the one hand and disseminated, dispersed and technologically subjugated on the other hand) is the hypermodern phenomenon. Finally, my main concern is not with the simultaneity of events that punctuates the local and the remote. Rather, the primary concern is the way that that hypermodern subjects tends to approach this
duality. This involves an overemphasis on the instrumental “presence” of action and the failure to understand the way that interconnected technological framing establishes interactive limits on the conditions of human self-actualization as well as the continuous formation of human subjectivity.

The emergence of a virtual and technical framework of acceptable human activity is especially forceful in the age of information technologies. In spaces marked by information circulation, people do not necessarily “use” a technological tool. Sometimes, the person is acted upon by the technology as a pure object of technical scrutiny. Sometimes a technological device is an image or sign that is heuristic while not actively falling under the instrumental capacity of man. The notion of a capable actor bringing about desired ends is not a suitable starting point for any analysis of social technology. The vocabulary of “means” and “ends” needs to be reconsidered. Again, consider the example of modern commercial airport. If one takes full stock of the consistent presence of digital information collection, x-ray scanning, surveillance cameras, information monitors, and automated mechanical technologies, one can momentarily bracket away the instrumental “means” and “ends” served so that we can ultimately examine the common technical conditions that make the hypermodern traveler a possible mode of existence. So, while my project draws numerous examples from the structures of airports, it is, generally, a study of the form politics could take anywhere else in the developed world. To illuminate the hypermodern mode of life is to address the politics of “being mobile” and “real time.”

Airports are material, concrete and grounded in a particular place, yet they are surrounded by and enveloped by various systems of immateriality and mobility. They are full of rules, laws, procedures, gadgets, passengers, observers, threats and, most importantly, technology. It is remarkable what the procedures of airports tell us about the conditions of
democratic possibilities in the era of global tourism, international mobility, e-commerce, and digital communication. Over the next five chapters, I will explain how technologically saturated spaces, like airports, generate the technical conditions of possibility for many social, political and economic actions. I will also explain that these technical conditions also establish limits on these very types of action. But, for the sake of this introduction, I must now introduce a very useful theoretical concept for understanding the hypermodern. How one understands “speed” directly limits how one is able to think about the conditions of hypermodernity. The hypermodern, as a mode of existing in the contemporary world, is the condition of coming to know the world through speed. To conduct a thorough exploration of the hypermodern phenomenon, one must have a working definition of speed. Therefore, a study of the hypermodern requires not only an examination of day to day experiences that are enabled by technological interactions, but it also requires an understanding of the mode of being through which these experiences can be had.

**Speed**

I noted above that the hypermodern phenomenon is characterized by the emerging possibility of humans experiencing on two levels (local experience and networked experience). This dual experience simultaneously allows a person to “be” in both local physical space and the technical space of circulation. (By “be” I mean both to have an impact on the world as well as being impacted by the technological.) Therefore, it is necessary to think of speed in two senses: as an instrumental capacity and as a human-technical relationship. I begin my clarification of the concept of speed by making reference to Paul Virilio’s essay "The Third Interval: A Critical Transition." (1993) He implores his readers “We would do well to recall that speed is not a
phenomenon but a relation among phenomena, in other words, relativity itself... This quotation (and the context Virilio provides), combined with a Heideggerean framework of phenomenological analysis, is my starting point for defining speed.

In the instrumental, localized sense of speed, the relation between phenomena is conceived in traditional (scientific) notions of time and space. Something “occurs” in miles per hour, or frames per second, or megabit per second. This sense of speed is defined by the beginning and the end of a process such as movement or duration. Thus, the ultimate measure of speed in this instrumental sense is the rate of execution. When one “interacts” with a technological object in a given setting, one can think of speed as “how fast will this tool allow me to accomplish my goal?” This is the first sense of speed.

However, I propose another notion of speed that we must always keep in mind when thinking about the human relationship to technology. Going back to Virilio’s quote, he claims “that speed is not a phenomenon but a relation among phenomena...” If we define the phenomena in question as that of humans and objects being in the world, of the human and technical existing in the world as it is “given to us” (in Heideggerean language), then the “relation” between phenomena is actually the way that humanity is shaped by the material impact of technology at the same time that humans construct their technical environments. The “relation” between phenomena, in this sense, is the co-constitution of the human and the technical other. In other words, by drawing on Bernard Stiegler’s transductive ontology that humans are always already technical in their very make up, speed needs to be considered as an ontological category of the relation between man and technical other. Obviously, if one adopts

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3 Ian James, who wrote the intellectual biography Paul Virilio (2007), is quick to point out that while Virilio does assert that speed is a relation between phenomena, he also used the word in a number of different contexts. (pp. 31-32) This is a problem for my very particular interpretation of both the “hypermodern” and “infospheres” just as it is for Virilio when he modulates his writings between the politics of perception and his economic discourses.
such a position, then the 20\textsuperscript{th} century developments of mass production and virtual technology are very much at the center of what constitutes the (hyper)modern subject. This “relation” between phenomena is eternal and never-ending, not discrete moments of directed tool use. Rate of execution is secondary to the intensity of interaction. The human relation with the technological is always a background condition from which we get our point of view. It doesn’t have an end-point. Therefore, rate of execution isn’t a fully inclusive measure of the relation between phenomena.

Knowledge, sense perception and memory all emerge from a pre-cognizant understanding of the world as an environment of objects. Increasingly, the objects in our world are manufactured pieces of technology or industrially disseminated images, sounds or experiences. The more that people rely on the mediation of technical objects to carry out their daily habits, the more intense the relationship of co-constitution between human and object becomes. But it also means that a person’s orientation toward the world is simultaneously made more intensely “technical.” Thus, speed in this alternative sense, is better thought of as the intensity of co-constitution between humans and their surrounding technical environments, or an intensity that structures the human existence through technological objects. Furthermore, “intensity,” as the primary characteristic of speed thus defined, refers to the intensity of the connectivity that humans have with their technical surroundings. “In this sense, speed is both enabling in so far as it permits us to (engage the world), but also limiting in so far as it determines the manner in which things appear to us…” (James, 2007, p. 32) In earlier times of human history, the “technical” could be a synonym for a tool, whereas now the “technical” is just as easily defined as numerous systems or networks of interconnected infrastructures. The definition I attribute to speed is evolving in the same way that the human-technical relation
evolves. Thus, modern technology generates distinctly new speed relations that man hasn’t encountered before.

While Virilio does lack consistency in his description of speed, he does make it clear that speed is a relational intensity. He demonstrates this by detailing the ways that dimensions of physical space and measurable duration are collapsing in the face of technological advancement. The possibility of being doubly present, by physical presence and “telepresence,” is his ultimate demonstration of the futility of organizing human perceptions of the world around descriptors like here, there, now and then. (Virilio, 1993) These words are spatial and temporal descriptors of the human being in the world. Virilio argues that we need to think in terms of descriptors of intensity. To be telepresent means that a person, through video and satellite technology, can maintain their presence in two simultaneous places. Their phenomenological “presence” is granted by the attention and focus that their physical body receives as well as that received by their electronic representation (simultaneously, of course). Virilio continues that we need to recognize that through technical extension, those traditional descriptions of space and time intervals cannot adequately describe the human experience of multiple presences and simultaneity. Philosophy must make room for different descriptions of the human “place” in the world based on the intensity of experience. Multiplicity, simultaneity, instantaneity, virtual doubles and automation processes are all best thought of as increases in the technical intensity of the human experience, prosthetic experiences, even though these concepts may be marked by less and less human “action.”

Virilio declares that the mental categories humans bring with them to interpret the world are out of date, namely the temporal “present” and the spatial “presence.” Similarly, I argue the relationship between human and technical infrastructures requires that people stop trying to
locate a firm ground for experience in the “here” and “now” and instead understand human experience in terms of intensity…in terms of speed⁴. In this experience, the human is best equipped to describe their worldly encounter with technology as underexposed, exposed and overexposed (opposing before, present, after). Prior to electronic and digital absorption of the world (say, the world of hand tools), speed was relational but it merely related the human to the world by bringing the world closer, sooner, more controllably, and making it more observable. Now, however, in many contexts the “world” isn’t necessarily something that one approached through technology. Rather, in the highly urbanized, technologized areas of the globe, the world is technology. Roadways, the unseen electric grids, invisible phone signals and constant digital information flows constitute the world itself. To perform many of the fundamental tasks of day to day in urban or suburban life requires people to interact with this networked “world.” The hypermodern human-technical interaction is the extent to which a person experiences the intensity of this connectivity and the degree to which multiple technical assemblages are incorporated into a local set of spatialized actions. The intensity of connectivity is the intensity of speed.

*Philosophy of Technology and the Context of Hypermodernity*

I have stated above that I am approaching this project through a “Heideggerean” framework. But, strictly speaking, this project is not solely an exercise in Heideggerean phenomenology. I engage a wider range of literature in the philosophy of technology, political theory and human geography. I need to take a moment to contextualize this project.

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⁴ Also note that while spatial and temporal descriptions are perceptual, my description of intensity is attuned to practical engagement with the technical world. This further ties my theoretical approach to a particularly Heideggerean phenomenology.
For good reason, many philosophical interpretations of technical life use as their starting point Heidegger’s 1953 lecture/essay “The Question Concerning Technology.” Here, Heidegger attempts to bring to light that the “essence of technology” is not the form or function of objects, but rather an ontological condition from which a particular human understanding of the world emerges. In non-Heideggerean language, it can be translated that the essence of technology is that human understanding of the world becomes saturated, even if only in the background of our conscious minds or collective debates, by notions of efficiency, instrumental calculations and a will to solve problems (master the world) through objects. Heidegger believes that the world is not a neutral realm that humans approach from the outside to bring under their reasoned control. He believes humans only exist in and through their everyday engagement in the world. These everyday engagements “reveal” the world in a certain way. The technological mindset I describe above is not a “false” way of viewing the world, but rather one that “reveals” a very specific image of the world as something that needs to be mastered or overcome by human will. From this position, Heidegger declares that “Technology is therefore no mere means. Technology is a way of revealing.” (1993, p. 318)

Lastly, and this is extremely crucial for my investigation of hypermodernity as a mode of being in the world, “One of Heidegger’s most daring theses is that the essence of technology is prior to, and by no means a consequence of, the Scientific Revolution.” (Krell, 1993, p. 309) In other words, the justification for the pursuit of science, technological development, efficient means, technical solutions, exists before the actual pursuit. A certain mental horizon of possibility emerges in coordination with a technological ontological worldview. It is through the background mindset described above that even undertaking such endeavors seems to make sense
at all. Later in this project, I argue that one of the human attitudes that emerged in recent decades is that people understand the world in terms of “fast” and “slow,” valuing the former over the latter as instrumentally superior. Since humans bring that background understanding with them into their practical engagement with the world (and I detail in Chapter 2 how this attitude has been appropriated), certain technical processes dominated by rate of execution seem perfectly “normal” or “appropriate.” Of course, this acceptance of “fast” only considers speed on one level of experience (the instrumental) and fails to see how the other experience of intensity subtly continues to reinforce a certain mode of “revealing” and fosters a certain dependence on technology. Government surveillance, economic transactions, physical architecture, regulatory processes and practices all emerge from this existing worldview of instant information to “order” and “structure” the world according to the demands of real time. Therefore, certain processes that are normally rooted in non-technical understandings of duration and space are forced to be “played out” in a technologically “intensified” manner. For instance, I conclude this study with an exploration of identity formation and the friction that exists between traditional notions of duration and a “technological” predisposition toward “fastness.”

According to Heidegger, the essence of technology is that it renders all points of contact technological as well. The inherent potential of our worldly objects is no longer allowed to be “revealed” because the social practices built into technology rationalize and enframe the object into an order of standing reserve, where use is valued over internal potential of being. (Heidegger, 1993, pp. 318-319) Andrew Feenberg, a frequent commentator on the relationship between Heidegger and Marcuse, argues this point when he writes “the equipmental realm, now defined as the ‘world,’ is no longer approached through structure of the product as it is by Aristotle. Instead, Heidegger develops a phenomenology of Dasein’s use of objects.” (2005, p.
I argue that the existential intensity one experiences by increasingly occupying networked and connected environments is complicit in enframing. In the age of light speed technology and immateriality, the relations that rationalize and order our lives are ones of instantaneity (instantaneity in an instrumental sense of execution). The horizon of “possible” solutions then emerges in contrast to the ideal horizon of instantaneity. By “bringing forth” into immediacy, speed allows us to experience “enframing” of information in a very particular way. The extent of the problem of enframing can be grasped by Heidegger’s conclusion that humans are transformed into standing reserves for the continuation of the technological. I believe that it is necessary to think about speed in terms similar to Heidegger’s thoughts on technology. I will later contend that speed is complicit in the transformation of entire sites (objects, people, architecture) into “infospheres.” (Chapter 3) As my analysis continues in this vein, my focus shifts from Heidegger’s technology essay to his essays “Modern Science, Metaphysics, and Mathematics” and “Building Dwelling Thinking.”

*Post-Heidegger Philosophy of Technology*

Precisely because Heidegger devised his ontological argument about technology at such a high level of abstraction, “he literally cannot discriminate between electricity and atom bombs, agricultural techniques and the Holocaust.” (Feenberg, 2003, p. 329) He famously made the rather outlandish comparison of mechanized agriculture and the extermination camps of the Holocaust. I suppose that both mass agriculture and mass extermination organized huge amounts of resources, ordered and divided objects, used modern transportation networks, etc…in order to carry out their agenda. Heidegger would claim that a certain ontological worldview made both these possible. (Feenberg, 2003, p. 329) Comments like this, though, are far too indiscriminate
for a political theorist to buy into wholesale. Similarly, many later philosophers took exception
to the Heideggerean legacy of “dystopian” technology studies that “have a tendency to lump all
technologies under a single, generalized or transcendentalized ‘Technology’, and to see such
Technology as a danger or threat for humankind…” (Ihde, 2004, p. 123). Philosophy of
technology and sociology of technology studies, especially in the American tradition, have
turned toward more empirical analysis and the debate about whether technical artifacts are value-
neutral.⁵ Heidegger’s thought, though, is not well suited for this sort of empirical approach since
he almost stubbornly refused to clarify his ontological view with regard to epistemic knowledge
or production practices (no doubt a consequence of his understanding of the person already
entangled in practical relation to the world). Though, he gave some indications of his stance
toward certain types of technology when he wrote this about the peasants of Schwartzwald:

> Hourly and daily they are chained to radio and television…All that with
> which modern techniques of communication stimulate, assail, and drive
> man-all that is already much closer to man today than his fields around his
> farmstead, closer than the sky over the earth, closer than the change from
> night to day, closer than the conventions and customs of his village, than
> the tradition of his native world. (Heidegger, quoted in Dreyfus, p. 98,
> 1995)

In order to ground this project in a particular context of current philosophy of technology studies,
one cannot ambiguously circumvent the issue of value-neutrality, construction of knowledge or
production practices.

**On Langdon Winner**

What Langdon Winner calls “technologies as forms of life” (1988), I amend as the
“technologization of habit,” which involves the evolutionary co-constitution of humanity and
technology. Winner’s “forms of life” include a critique of technological society based on

⁵ This “empirical turn” has been documented in the anthology *American Philosophy of Technology: The Empirical
Turn* (2001) edited by the Dutch Philosopher Hans Achterhuis. Authors representative of this “turn” are Hubert
Dreyfus, Andrew Feenberg, Langdon Winner, Albert Borgmann and Donna Haraway.
somnambulism, or sleepwalking through the activities in which actors unreflectively shape the world in which they live. I use the word “habit” to build on this idea of repeated daily forms of behavior put forth by Winner, but I want to supplement his lead by addressing the process of what I call “technologization.” Technologization of habit implies a playing out of action not only in an environment of our own making, as Winner suggests, but also an unfolding of habit in a particular type of technical spatiality and technical temporality that is not totally of our own making (such as hypermodern space). If hypermodernity is defined by the conditions of possibility generated by technological connectivity across space and our ability to conceptualize this phenomenon is only possible by articulating a relational understanding of technological speed, the process of technologization of habit is surely associated with the functioning of speed in space and time. The impact of technological speed is not solely experienced by the human body or mind, as Virilio sometimes makes out to be the case. Instead, the overwhelming impact of technology’s ability to organize and to frame the conditions of human experience force us to reconsider our notions of space and time “because (technology) is capable of an effect, of inflicting some kind of blow on reality.” (Harman, quoted in Thrift, 2005, p. 468) The “blow” in this case is enveloping human inhabitants in uniquely hypermodern temporal practices (simultaneity) and spatial practices (local and remote). It is through this technologization of environments that hypermodern habits can emerge at all.

One would be terribly mistaken to assume that technology automatically shapes our habits to conform to its internal technical code, or that somehow the mode and manner of production absolutely determines its use in the social totality. But, it is equally naïve to assume that our relationship with our myriad technical devices and environments is totally unencumbered by the built-in aspects of the technology itself. These built-in capacities (such as
Transmission, information storage, digitization, visual and audio editing functions) possess the inherent ability to reorganize massive amounts of information about the world. We cannot ignore that our habits, both physical and social, are conditioned by our interaction with this organized information. But, critical to remember is that we interact with technology and that our actions are not determined by a pre-given instrumental use of technology.

Our “interactions” with a computer connected to the internet can be simultaneously felt in markets around the world, instantaneously in multiple locations or in virtual destinations, rendering actions, interactions and responses both local and global. The idea of “using” these devices in an immediate local context to achieve a goal hides the extent to which the mode of experience is a simultaneously global, distant phenomenon. Our “interactions” with global positioning technology can be seen as locally located at the source of the human user, or at the source of information gathered, or somewhere in between in the space of the digital transmission. Has Baudrillard’s “simulacra” thesis ever rang more suspiciously true than when simulated locations and simulated moments usurp the simulated image as the dominant form of significant social meaning? The way in which we relate to technologically generated representations of moments and places (space and time) certainly molds the assumptions we hold to be true about our spatial and temporal experience. And, if Baudrillard is correct, basic human-technics interactions in the environment of hypermodernity, populated by the “hyperreal,” involves an innate social understanding of reality that presupposes a form of technical revealing prior to an embodied or conscious form of human “use” value.

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6 In a section of Jean Baudrillard, Selected Writings (pp.166-184) titled “Simulacra and Simulations,” Baudrillard writes “Simulation is no longer that of a territory, a referential being or a substance. It is the generation by models of a real without origin or reality: a hyperreal. The territory no longer precedes the map, nor survives it. Henceforth, it is the map that precedes the territory - precession of simulacra - it is the map that engenders the territory…”
I have already mentioned my indebtedness to Langdon Winner’s “technologies as forms of life” thesis. (1988) He comes to this position by combining a reflexive version of Marxist materialism and labor (p. 15) with Wittgenstein’s reference to multiple forms of life (p. 12). Thus, Winner’s political stance involves the study of various forms of material production which create a variety of technological contexts that form contexts of meaning for those involved.

While Winner is fairly straightforward in his insistence that our habitual, or even novel, technofashioning shapes our given meaning-context, Habermas argues that on either side of this practical activity exists an undifferentiated lifeworld and world of scientific knowledge “and to this extent the cleavage between the two cultures is inevitable.” (Habermas, 2003, p. 531) His area of concern, like Winner, involves the interaction of these two worlds and the ways in which we succeed or fail in incorporating scientific knowledge into our shared understanding of practical knowledge in the lifeworld. And, he too cites the importance of a philosophy that calls for reflection on technology and science “anew each time in the framework of a self-understanding determined by tradition.” (2003, p. 531) These two men want to frame the relationship between politics and technology as one that requires a new formulation of politics to be based on reflection of practical activity. Another approach argues for a reevaluation of epistemological claims deduced from Western, masculine-derived science, and therefore its validity as a form of knowledge, in order to better understand power relationships in society (Harding, 2003). In this way, Sandra Harding suggests that the activity of politics should be one of critique and questioning rather than one of practical integration of scientific and political decision making. If the above approaches to the political study of technology ask questions about the relationship between politics and technology, another body of literature specifically seeks to theorize the compatibility of current large-scale technological systems (and highly
integrated contingent parts) with democratic practice. Perhaps the most ambitious type of scholarly engagement with politics and technology, some prescriptions support deliberative democratic policy for technological use (Hamlett, 2003), performative agency in the mode of post-modern technological fluidity (Turkle, 1997, 1999) or democratization of science and technological development itself (Feenberg, 2005).

Lastly, the extensive literature surrounding socio-technical structures and the social construction of technology (SCOT) is always in the background of this project, yet I only directly engage it in Chapter 2. My work acts as something of a foil against this literature. I address a specific debated that took place in the pages of Science, Technology and Human Values, started in 1993 with Langdon Winner’s devastating critique of the SCOT. I provide commentary on this debate and I focus mainly on those scholars immediately relevant to this exchange (namely Winner, Pinch, Bijker, Woolgar and Elam).

It can be asserted that “technology” is synonymous with objects, but it is a position with which I rigorously disagree. According to this view, what constitutes “technology” is a material artifact that is created by people where the technological function is derived from its form and its form is derived from human reason. If the technological is synonymous with the materiality of an object, then technological form is the way the artifact is purposively arranged in, and interacts with, its material environment (which including human bodies.) This view articulates a strong distinction between technology and nature since the form of technology must necessarily be the result of human labor and reasoning instead of natural processes. But, I argue that technology is not limited to the mass or shape of an object, the duration of its use or the outcome of its performance. Technology is not simply objectness. For, if we define technology by its form and function (both categories defined by human “reason”) then “the question about the thing is now
anchored in pure reason, i.e., in the mathematical unfolding of its principles.” (Heidegger, 1993, p. 305) Technology is not something that is only “technological” in discrete moments of purposive use, but always exists “technologically” in its practical engagement with the world. This is especially true in an era where technology is becoming more and more autonomous, immaterial and ubiquitous (automated environments, constant surveillance, and satellite transmission). Noting this, it becomes impossible to define technology by either its function or its form. The technical artifact doesn’t simply exist in a given environment but plays a (non-anthropomorphic) role in the formation of the environment. Therefore, we should acknowledge that the technological extends to the reasons behind the creation of an artifact and to the (un)intended effects that its form yields. Technology, as a cause and effect (rather than a mean and end), is a mode of existing in the world, a way to experience through the objects of our creation and a unique conceptualization of the world and its problems. Environments in which this relation between human and object occurs are part of the technological; therefore, the interaction between human and object is technological as well. This is precisely what Stiegler argues when he proclaims that humanity and technics (the material objects of our creation) are transductively related.

This is the post-industrial age. This is the age of the service economy. This is a point in history where internet use and online experience rival embodied physical activity and face-to-face interaction. The ubiquity of technological devices and the excess of electronic interconnectedness (speed pollution) are defining features of this era and this trend will continue into the future. Perhaps the most troubling interpretation of this era is that technology opens new

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7 In this context, Heidegger defines mathematical as “the things insofar as we take cognizance of them as what we already know them to be in advance...” (p. 275, 1993) When we presuppose that a piece of hardware is technological to the extent that it has a given form or function, this limits our understanding of “technology” to only that which we can predict in advance. Otherwise, if it does not conform to it prescribed understanding, we import adjectives like “broken” or “misappropriated,” which lie outside the understanding of form and function.
avenues of activity and accomplishment. There is no denying that technology enables new activities and makes possible things previously thought impossible. But, for every instance that technology renders possible, it also renders another instance obsolete or unthinkable. Previous technological artifacts, personal habits, perceptions and conceptualizations are discarded, disjointed, ignored or forgotten in favor of newer ones. Our dependence on technology or resistance to it, both on the individual level and at the social level, largely determines this dialectic of creation/obsolescence, possibility/impossibility. The movement within this dialectic often takes the practical form of redefinition, subtle variation and modification of previous habits, laws and procedures. And sometimes, we redefine our habits and conceptualizations in ways that are far from subtle. What should be clear from this ongoing interaction with technology is that the “technological” is not limited to discrete moments of instrumental use of objects, nor is progress a unidirectional technological trajectory. Rather, the “technological” is ongoing, ubiquitous and multidirectional.

A Review of Theoretical Airport Studies

I have selected airports as my prime illustration of hypermodern settings because of their level of advancement in terms of real time environments. I believe that the level of technologically produced speed in the form of digital and electronic information transfers is crucial to understanding how technology constructs space and time in which the context of everyday activity unfolds. There exists a healthy literature surrounding airports as a paradigmatic candidate of technology studies. There have been cultural analyses of airports

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8 Virilio makes a tangential argument in debunking the myth of Enlightenment “progress.” He reminds us that “accident is diagnostic of technology. To invent the train is to invent derailment; to invent the ship is to invent the shipwreck. The ship that sinks says much more to me about technology than the ship that floats!” (1998, p. 20) In interview conducted by James Der Derian
(Fuller and Harley, 2005), cultural histories (Gordon, 2004) and in 2008 Mark B. Salter edited a collection of political airport studies titled *Politics at the Airport*. Even the famed technology studies scholar Thomas J. Misa begins his introductory chapter to his co-edited *Modernity and Technology* (2004) with an anecdote about time spent in Amsterdam’s Schiphol airport and claims that airports are large scale socio-technical structures that epitomize modernity. To the already existing literature, I am seeking to fill a gap (a presently emerging gap) in theoretical analysis by analyzing airports as paradigms not of modernity, but hypermodernity. The analyst of 30 years ago may refer to airports as travel nodes, through which the social activity of travel takes place in a highly coordinated and rational way. By presenting the nature of this coordination and rationality, Misa argues airports are paradigmatic of the “tangle” between modernity and technology. I argue that today airports can better be described as mobility nodes, in which countless forms of mobility exist in these technologically constructed spaces. Rather than explore "travel" as the form of mobility in question, I propose a study of mobility as an everyday practice, enabled by technical objects and infrastructures, where technological interfaces and transmissions are analyzed in their own right and not simply as a means to an end.

But how exactly do the everyday, repeated practices of thousands of passengers per day qualify as something more than the mundane? In what ways can regulated interactions with airport technology be seen as political? In what ways are airports seen as inherently political and symbolic of political power? And, finally, does this notion affect the public impression of airports and prepare the masses for a more submissive and subjugated disposition towards the airport experience when airports are “running smoothly?”
The Airport as a Political Space

In a recent New York Times feature, the issue of new airport surveillance technology was put before five different professionals and academics. While opinion varied widely about the efficacy and ethics of implementing new full-body scanners, a general sentiment could be discerned throughout each opinion. The specific approach to airport security may be debatable, but all five experts conveyed that airports have gained increased political importance as a crucial point in national security infrastructure. After September 11, 2001, airports became the front line of the domestic War on Terror. This summarizes one of the major reasons why I selected airports as my primary example of hypermodern spaces.

In post 9/11 Western political consciousness, airports represent a point of convergence between a sense of security, freedom and suspicion. Many of the technologies in place in airports operate in ways that are compatible with this sort of political consciousness, reinforcing the airport as the domestic front line. In Chapter 5 of this project, I specifically look at two types of airport security technology. The use of biometric identity documents and full-body scanners confront performative identity narratives and force personal identity to be defined not from personal history but from the technical viewpoint of what is “secure,” “suspicious” or “safe.” However, while my analysis of these technical practices from a national security/civil rights standpoint forms a significant portion of this project, this is not the only reason I have focused on airports as hypermodern space par excellence. There are two other distinct reasons why I focus on airports as political locations.

First, as some scholars have rightly pointed out (Urry (2007), Shamir (2005)) mobility is a resource enjoyed by some but not all people. Different types of movement and mobility are

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reserved for certain social groups. Political leadership, for instance, utilizes this resource on the campaign trail, in public relations battles and to assert political clout. That the concept of mobility has taken on this significance has had huge implications for the public conception of airports. Airports have become front and center, not only in the War on Terror, but more locally as domestic centers of political activism. Alongside government buildings and central town squares, airports are taking on both logistical and symbolic importance in protest movements of late. By focusing on airports as sites of protest, not only is the public challenging the monopoly on the resource of mobility, but the logistics of contemporary social circulation are also disrupted to great effect.

For example, three days after a tragic June 30th plane crash, protesters chose Paris’ Charles de Gaulle as the site of political dissent and conscientious objection to European Union aviation policy. Protesters arrived outside Charles de Gaulle’s Terminal 3 to denounce the practices of Yemenia Airlines, block passenger access to the actual terminal and draw the European Union’s attention to the need to “black list” the airline and ban them from EU airspace.10 On the previous Tuesday, Yemenia Airlines Paris-Moroni flight crashed killing 152 people. The tragedy was amplified by the frustration among the Comoran community in France who had previously complained about the quality and safety of this particular flight route. Sixty-six French Nationals were among the victims. Naturally, the protesters chose airports as their site of demonstration as this was a direct reaction to the aviation industry. Yet, the protests were decidedly more politicized than a spontaneous outpouring of grief and frustration.

The manner of the protest involved the demonstrators linking arms and literally blocking mobility. The human wall attempted to limit access to the actual airport and the actual boarding

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of the Yemenia plane. Their frustration and defiance was also an overt attempt to place pressure on the French government to alter their policies. Only a month earlier, an Air France jet traveling from Brazil to France crashed into the Atlantic. The June 1, 2009 crash was a major news story due to the mysterious circumstances surrounding the crash. The French Comoran community argued that the French government’s vocal reaction then and more muted reaction to the latter flight were disparate given the similar scale of tragedy. The Comoran protesters felt as if the government had been negligent in handling the ongoing complaints about Yemenia Airlines and had blatantly been more empathetic and proactive in assisting those affected by the Brazil crash. Forming a human wall as a form of protest connoted solidarity among an ethnic community and expressed this solidarity in a very visible way, a way that related their concern to French society as a whole. The human wall sought to stop the smooth operation of mobile industries. It wasn’t simply an action to prevent others from flying the route as the doomed June 30th flight. They were creating awareness of ethnic marginalization.

Additionally, the protesters sought to have Yemenia Airlines added to the more than 200 other banned airlines that are not allowed in European air space due to inadequate safety standards. Not only did the protest attempt to interrupt the operations of a poorly perceived airline, but it also placed pressure on France’s government to alter EU-wide aviation regulation. In a sense, the Comoran community felt as if they were subjected to unequal travel conditions due to institutionalized discrimination. They were subjected to danger not because of their status in the eyes of the law but because of their status in the eyes of the mobility regime. Ronen Shamir notes that in the age of globalization, traditional notions of citizenship and human rights are confronted and challenged by new emerging notions of the global mobility regime. “Above and beyond tensions such as between national sovereignty and human rights, we are witnessing
the emergence of a new cultural/normative global principle that operates as a counterbalance to the normative principle of global human rights.” (Shamir, 2005, p. 199) Shamir contests the notion that globalization is a process “that profoundly challenges the heretofore sacred notion of bounded territoriality and its bundle of associated citizenship rights.” (2005, p. 199) Rather than a global citizenry emerging with a homogenization of rights bestowed on travelers with the ability to take up residency in other countries, Shamir argues that “the social nearness that globalization allows for is also constitutive of simultaneous processes of social distance.” (2005, p. 199) In other words, the act of being mobile and moving between territories does not encourage equal treatment for all global travelers. Instead, travel increases social distance by relying on profiling for security, allowing different safety standards amongst rich and poor nations and allowing and disallowing travel for different groups of people. In the case of the Yemenia Airlines disaster, the “mobility gap” has made the Comoran community of France feel like second-class citizens in harsh contrast to those similarly affected in the Air France crash only weeks earlier.

Perhaps the protest has gained some traction. French President, Nicolas Sarkozy, was quoted as saying “Some measures were taken in France. But there is no question that we now need to have global regulations so that a company deemed dangerous cannot carry passengers anywhere in the world.”

However, while I argue that recent developments in the social attitudes towards mobility are creating points of resistance in airport space, it is equally important to note that airports typically operate smoothly and without incident. In fact, given the flight patterns of the major airlines and the standardized procedures implemented by the TSA in the wake of the 2001 terrorist attacks, airports are largely identified as spaces of repetition and consistency. No doubt,

11 http://www2.canada.com/france+threatens+blacklist+yemenia+over+crash/1757307/story.html?id=1757307
this resonating image of uninterrupted circulation is largely why the interruption of airport
operations is has such powerful purchase with protesters recently. But, nonetheless, airports are
not only political spaces when they become the focal points of protestation. They are also
political in their patterns or repetition, circulation and categorization. David Lyons argues that
these modes of surveillance are indicative of contemporary social space, not merely airport
space. Influenced by Deleuze’s “societies of control” meme, he writes:

    Surveillance occurred in departments of the state and in agencies such as
policing, in workplaces, and in the marketplace. But, as the value of data
to other organizations became apparent, and as technologies were sought
and designed that allowed such data to circulate, so those discrete
surveillance agencies were able to cooperate, and their activities to be
coordinated. Surveillance practices and processes were already
converging before 9/11; the process accelerated afterwards. (2003, p. 105)

The key point here is that airports are not the only location where surveillance has heightened
post 9/11, but they are certainly amongst the most visible sites. After all, it is airports whose
cycles of repetition are reinforced by “audio-visual” protocols, yet more invasively, more
intensely and more concentrated than city centers. The point is that these practices and protocols
are a major aspect of hypermodern space and while a loosely hypermodern surveillance net is
descending on urban life in general, airports represent a highly accelerated version of
information circulation.

Chapter Outline

The intention of this first chapter was to pose my research questions: how do we articulate the
conditions of hypermodernity? In order to do this, I have outlined my approach to the subject of
speed by introducing speed as the “relation between phenomena.” In order to articulate the
“intensity” of this relation between humans and technics, I introduced a Heideggerean influenced
phenomenological frame for thinking about the essence of technology and, therefore, the essence of speed. I next identify a setting in which countless technological phenomena are integrated and coordinated by merits of real time technology: contemporary, commercial airports.

Chapter Two is dedicated to explaining exactly what I mean by “the crisis of speed.” The hypermodern phenomena I define in Chapter One is synonymous with the dual level of experience people encounter in settings defined by information circulation. The instrumental experience overshadows the relational experience, thus reinforcing a “technological” form of revealing to which hypermodern man is subjugated. Society has widely embraced “dromological rationality.” I draw on Max Weber’s concept of “rationalization processes” and his concepts of the rational to enhance the scientific and bureaucratic (and now technical) notion of formal rationality. This chapter could also be described as my attempt to bring Weber into dialogue with Paul Virilio in order to justify not only the emergence of Heidegger’s “technological” way of viewing the world, but also its perpetual strengthening and expansion to new levels of technical domination.

In Chapter Three, I continue with my analysis of Virilio in my discussion of an “infosphere.” I supplement Virilio’s notion of the infosphere by drawing on the French philosopher Bernard Stiegler. Yet, unlike Chapter Two and my attempt to bring Virilio’s work into dialogue with Weber, Chapter Three will provide a stark alternative to Virilio by drawing on Stiegler’s post-Heideggerean project. Both Chapters Two and Three are aimed at introducing a theoretical foundation for conceptualizing speed and a descriptive diagnosis of the conditions that speed has created. Yet, my description of infospheres remains abstract and a too generalized idealization of “speed economies.” So, I aim to provide detailed and provocative examples of how the immaterial qualities of speed materialize in the concrete setting of airports.
In my fourth chapter, the airport is presented not as a technical environment, but as a political environment. While this project draws heavily from technology studies, phenomenology and classic sociology, it is above all crucial to indicate that hypermodernity has significant political implications. The politics of airports are intricately bound together with political concepts of identity and subjectivity, both of which are “shaped” by the airport experience itself. Thus, I contrast Marc Auge’s ethno-anthropological analysis of “non-places” with Michel Foucault’s concept of “heterotopia” in order to introduce the intersection of technology, speed and identity politics all housed in the modern airport infrastructure. Essentially, Auge and Foucault’s respective concepts of “non-place” and “heterotopias” are well-known, heavily debated concepts. I propose an alternative reading of airport space as an “infosphere” as a theoretically improved concept for the analysis of hypermodernity.

The major concern I am addressing Chapter Five is that speed increasingly transforms concrete objects into immaterial transmissions compatible with the functioning of a speed regime. Chapter Five is entirely dedicated to biometric identification means, full-body scanners, and the technical hardware in place at airport security checkpoints, with special attention paid to the relationship between these technologies, technological speed and political subjectivity. The analysis of airports as total environments (with economic, legal, political, logistical implications) demonstrates how numerous social intersections play into the technically mediated formation of political subjectivity. In the final chapter, Chapter Six, I conclude by summarizing my project in the context of Heidegger’s notion of dwelling. By thinking through the notions of building (building specific spaces) and dwelling (as the condition of being in the world) I try to formulate a notion of mobile politics that can articulate “the possible” while living in habitable circulation.
Finland has become the first country in the world to declare broadband Internet access a legal right.

Starting in July (2009), telecommunication companies in the northern European nation will be required to provide all 5.2 million citizens with Internet connection that runs at speeds of at least 1 megabit per second.

The one-megabit mandate, however, is simply an intermediary step, said Laura Vilkkonen, the legislative counselor for the Ministry of Transport and Communications.

The country is aiming for speeds that are 100 times faster -- 100 megabit per second -- for all by 2015.

‘We think it's something you cannot live without in modern society. Like banking services or water or electricity, you need Internet connection,’ Vilkkonen said.\(^\text{12}\)

In June, France's highest court declared such access a human right. But Finland goes a step further by legally mandating speed.\(^\text{13}\)

The hypermodern and the proliferation of technical spaces that facilitate its dual experience are an emergent form of social experience. By emergent, I mean the hypermodern experience is facilitated by new information and communication technologies that have just recently (over the last several decades) been mass produced and installed into settings of social action. The ability to circulate, compute, interpret and respond to information at near-instantaneous speeds is a new phenomenon. The ability to act visually or aurally across vast distances is not new, but the ubiquity and frequency of such technical practices is. The (hypermodern) ability of a person to instrumentally use a tool in a local setting while

simultaneously being introduced into a networked relationship of digital relations is a new phenomenon. However, prior to any discussion of those traits of hypermodernity, I need to address the reason why such phenomena are embraced (even demanded) by both social organizations and individuals. I believe it is necessary to explain how and why the hypermodern is emerging as a (possibly) soon-to-be standardized way of experiencing the world. To do this, one must understand the relationship people are developing with their technical surroundings.

Of course, the industrial production capabilities of late capitalism, technological advancement, globalized distribution networks and increased consumption are factors. But, there is also a social logic at play that “values” speedy results and has grown accustomed to inhabiting technical infrastructures that promote instantaneity. However, more than simply growing accustomed to an accelerated pace of life, the technological momentum towards faster results orients people towards the pursuit of ends through a specific form of means. More specifically, this chapter argues society (at the level of both social organizations and individuals) has formed a relationship with its surrounding technical environment such that people organize their understanding of social action in relation the operation of simultaneity. In contrast to the notion that instrumental speed is merely a trait of more efficient means, I want to suggest that technically mediated social relationships are so common now that a presumptive need for technology has gradually organized people towards a technical disposition of how action should occur. This technical disposition forms a part of the background meaning context of certain social relations. And, in some settings that rely heavily on information technologies, this disposition forms the core of the background meaning context.

Max Weber’s interpretive sociology is largely geared towards describing the meaning context from which social action could emerge as rational behavior. Weber maintains that to
understand what is considered “rational” one must understand the shared assumptions, histories, habits and anticipated reactions that connect a social group. Rationality does not impose itself on social relations. It emerges from the meaning context that a group shares. A “meaning context” is a collectively understood set of assumptions and beliefs that people involved in its shaping arrive at through the orientation of their interactions. Thus, a socially understood meaning “provide(s) the horizon we draw around some particular aspect of social reality whose relations we are interested in knowing about; in this way, they define both the problem and the phenomena to be investigated.” (Breiner, 1996, p. 29) In this way, Weber’s sociological analysis provides a useful outline for explaining that what is sensible in one setting is not necessarily the case in another setting. “This understanding of instrumental reason as differentiated according to life sphere and within each life sphere is only possible for Weber if we view instrumental conduct under the concept of Verstehen. For then we interpret the methodical organization of conduct toward self-imposed ends as totally dependent on the meaning context in which such reasoning occurs.” (Breiner, 1996, p. 27)

The question I seek to address in this chapter is what effect technological mediation of social relations (and physical places) has on what emerges as “rational.” What kind of background understanding can emerge in a setting where people are surrounded by technical devices that promote instantaneous communication, transactions and results? Does an understanding of instrumental speed as a “necessary” function of pursing goals influence the form of rational behavior that emerges from a background context? I argue that social awareness of the variety of means available (technical means, specifically) influences the orientation of people towards one another. Specifically, people are growing accustomed to the idea that reciprocal social actions should occur in an ordered sequence at a specific rate of execution. A
mutually shared understanding that the “the world is fast” or that “Speed is necessary” influences the context from which practical problems and rational solutions could emerge. "All these are understandable complexes of meaning whose understanding we regard as an explanation of the actual course of an action." (Weber, quoted in Breiner, 1996, p. 36-37) All this is to say that technical mediation, in an age where mass production and mass consumption surrounds people with technical objects, is part of the orientation of meaning contexts.

I open this chapter with an article excerpt about the legal mandate for internet access in Finland. I took from the article several critical implications about the condition of hypermodernity. The article is saying that Finland’s government has formed an opinion about the general right that all people have to information and opportunities provided by the internet. But, I argue that the existence of a certain type of high-speed technology (in this case, internet access that can be delivered at high speeds) shapes and informs the background context from which the idea of this “human right” emerged. The existence of a certain technological speed influenced the background from which such a decision could be made.

While France considers internet access a human right, Finland declares that high-speed internet is the only form of internet access that is compliant with this liberal democratic notion of “human right.” In the Finnish declaration, everything takes a back seat to speed. It is not access to the internet that is the fundamental issue at stake, but rather a certain mode of access to the world of the internet information. Therefore, technical artifacts such as computer terminals, buildings to house them, wireless transmitters, and adequate broadband support only achieve the status of legal rights when they function together in networks of high-speed in which every citizen can act as a human filter. While this form of speed is technically measured in megabits, the internet user does not experience a “megabit.” The usage of high-speed internet
experientially unfolds in specific modes of practice for the citizen. The legal and ethical force of this new law is technological to the extent that the technological has little to do with hardware and everything to do with the experience. Finland is actually attempting to codify speed, not as a permissible practice but as a legal mandate and ethical human right. This law is not simply about the increased megabit speed of the internet but has everything to do with the ordering of social life around rationally arrived at value-systems in which the experience of speed is now center stage. Speed as human rights.

The other hypermodern consideration that can be inferred from the subtext of this Finnish law is the conspicuous lack of an easily defined “end” other than that of the technical experience. In the article excerpt above, the Finnish official claims that high-speed internet access is not something that one can live without. The purpose of this chapter is not to attempt and demonstrate the veracity of this claim. Instead, my goal is to discuss how such a claim can ever be suggested and taken seriously as a rational comment. How is it possible that the position taken by the Finnish government regarding high-speed internet could ultimately be rationally arrived at when there is no specific end to “high speed” and no utilizable, functional goal?

Health care promotes health. Free speech protects freedom. Banking stabilizes the economy. Internet offers repositories of information and arenas for personal expression. But, the law of universal access to high speed internet isn’t attempting to legislate or promote internet content. The law is governing the mode of access. But, what is the unalienable right of speed? The only conclusion is that access to high-speed internet is a fundamental human right in that it allows internet users to participate as efficiently as possible in online activity, most significantly online labor, consumption (of both goods and culturally produced information) and communication. The “end” preserved by this human right is not the right to life, liberty, health, happiness,
security or any other sanctified aspect of democratic liberalism. The human right of high-speed internet is actually the right to be part of a social world that is complex, comprised of technically connected networks of information and is ultimately obsessed with rate of execution. As people engage in more and more technological practices (indeed many mundane practices have become technologized) the tight complexity of these systems channel people toward pre-traced outcomes, namely cultural and material consumption.

This channeling is what Andrew Feenberg calls the “narrow focus of modern technology (that) meets the needs of a particular hegemony.” (1995, p. 17) Feenberg continues down this path with the ultimate exclamation that the “hegemonic” must be challenged. Furthermore, he claims that “democratizing” technology is one of the means through which the hegemony must be confronted. This view on technology is astute to identify that social and economic power is significantly anchored in the technical control of certain social contingencies. However, I feel that it is necessary not only to challenge hegemonic forces expressed through technology, but also to question the impact and power of technological artifacts themselves. (I am not convinced that Feenberg’s call for the democratization of technology sufficiently confronts the impact of the technological. If anything, it seems to suggest that it is possible to negate the power relationships present in the “hegemonic” design and use of technology by means of a “democratic” design and use of technology. Yet, both alternatives (hegemonic and democratic) are falsely located by Feenberg in a “social” position that is somehow ontologically “prior” or uninfluenced by the technological.) It is necessary to consider that technology is fashioned by external social forces but it also acts as a causal mechanism that influences social mentality and social perception, the very same social orientations that shapes the contours of what counts as “rational” and “political.” Also, I think it is crucial that when analyzing technology we do not
seek to propose policy solutions by merely replacing the standards and values of the current post-industrial hegemony with the standards of another equally rigid set of standards. That would be to simply redefine the means and ends of technological development.

**A Dromological Interpretation of Rationalization Processes**

Just as Max Weber saw something uniquely formal in the onset of modernization, I see something uniquely dromological emerging under the current conditions of post-industrial society. In specific, I think one of the peripheral consequences of the technical acceleration of life is the generation of rationalization processes with regard to human-technic interaction. Certain human-technic interactions (the ones that constitute daily habits like computer use, credit cards, communication, transport systems, utility networks) become routine. From these routines certain social expectations become rational largely based on the notion of “fast” results and the utilization of speed for given ends. Human-technic interactions are rationalized as technical solutions to human dilemmas, such as the lack of time or excessive distance. However, I argue that while modes of instrumental, calculating behavior have been “rationalized,” this rationality is (a) built upon a near-sighted, limited understanding of technology as “tools” or “means” and (b) ultimately a constrictive rationality of formal dedication to the “efficiency” of the administration of technological habits.

The objective of Stephan Kalberg’s in-depth analysis (1980) of Weber’s texts *Economy and Society* and *Collected Essays in the Sociology of Religion* was to catalog the various uses Weber makes of the term “rationality.” Weber’s various uses and contexts formed a typology of four distinct rationality types: Practical, Theoretical, Substantive and Formal. When I propose a “dromological” understanding of hypermodern rationality, I do not mean to suggest that a new
form of rationality has emerged. I do, however, find that given the average person’s habit of understanding human-technic interaction as a means/ends calculation at the individual level, (disregarding the existence of a techno-structural, techno-temporal level of experience), the practical rationality of human problem solving has become fused to the formal logic of technical systems. I am not simply suggesting a trumped up technological determinism. Rather, the intensity of the speed based human-technic relation is the very condition that gives rise to the possibility of these rationalization processes. It is my argument that due to the (fallacious) conceptualization of technology as mere tools (a means-end paradigm), social interaction with technology is rationalized such that techno-speed becomes an end in itself and the most dominant standard of “efficiency.” I will begin this section with a brief recap of Weberian rationality types.

Practical rationality is enacted when a person or group attempts to address a problem through a means/ends paradigm. They identify an existing problem and set about to implement the most appropriate means to bring about a desired end. “A practical rational way of life accepts given realities and calculates the most expedient means of dealing with the difficulties they present.” (Kalberg, 1980, p. 1152) (In this sense, Kalberg’s “practical” adjective can also be “instrumental” or “goal”. (McIntosh, 1983)) Another crucial aspect of practical rationality is that it justifies the rational from the egoistic and individual point of view without regard to larger value paradigms or cultural norms (or, I argue, technological conditions). The practical is predicated on the everyday conduct of actors trying to master their own set of circumstances. Thus, “practical rationalism in conduct is common to all civic strata; it is conditioned by the nature of their way of life…” (Weber, 1958, p. 284)
Theoretical rationality, according to Kalberg’s reading, stands in stark contrast to the practical for it is not predicated upon the everyday conduct of individuals but rather in abstract holistic interpretations of the world. The theoretical is increasingly dedicated to a search for “meaning” and amongst those that embody theoretical rationality are sorcerers, theologians and modern scientists. (Kalberg, 1980, p. 1153) Kalberg points out that theoretical rationality is identified by its “metaphysical need” and “irrepressible quest” to confer coherent meaning on the world. It is, therefore, the least applicable to the study of speed as relational integration of everyday technological habits and phenomena.

The last two forms of rationality, substantive and formal, are often presented in juxtaposition to each other. In light of the new types of technology employed as post-industrial “means,” I think it is appropriate to reexamine exactly what Weberian social theorists had in mind with the distinction between substantive and formal rationality. This will help clarify my assertion that the means-ends instrumental paradigm of technology studies has serious implications in the era of hypermodernity. “‘Formal rationality’ refers to ‘instrumental-rational’ action which tends to adapt to prevailing circumstances. ‘Substantive rationality,’ by contrast, refers to a rationalization of life-conduct oriented by certain ‘ultimate’ or ‘otherworldly’ ideals.” (Mommsen, 1989, p. 161) “A Good” or “ideal” to Weber is the determined byproduct of the interaction of various constituent parts of a social setting. Likewise, such ideals are reinforced at the level of “legitimate ideals” by a variety of authority types (Traditional, legal-rational, charismatic). Whether “the good” is determined through a relationship of domination, a relationship of power or a free relationship, “a good” is any standard or value, determined in a social setting, towards which people can strive. Whether or not the means remain subservient to the end defines what type of rationality is being practiced: substantive or formal.
Unique to Western modernization, Weber witnessed the expansion of the state, the increase in organizational capability, the flourishing of global capitalism and the advancement of technological means. “One of Weber’s major theoretical innovations was to provide a compelling rationale for extending the notions of ‘bureaucracy’ and ‘bureaucratisation’ to a whole variety of social organizations.” (Giddens, 1982, p. 200) As states, organizations and businesses became increasingly complex, the designation of their overall goals became less dependent on social relationships and more dependent on the voices of experts or impersonal goals such as profit or power. Bureaucratic decision-making supplants the positing of “a good.” In a modern and bureaucratic condition, means overshadow ends (they become formalized). This “bureaucratization” of different social arenas is precisely the phenomena I wish to explore and through which I will analogically extend Weber’s notion of the Iron Cage to the “technological” or “dromological”14 sphere. As the marketplace develops and capitalizes on the consumption of technological experience, human-technic interaction becomes increasingly tied to the everyday routine and conduct of life. This transforms human-technic interactions into bureaucratic-market reinforced technological habits, while still retaining the personalized instrumental relationship between human and device. The hypermodern man is not acting in an impersonal cage. (Credit cards are personalized. So are email accounts, computer passwords, internet search histories, GPS directions, etc.) Technological habits retain, from the point of view of the individual, a practical instrumental quality through which people conduct their daily lives. However, there is also the unexplored side of this process through which the structuring of technological systems formalizes the available technological avenues and creates the conditions for a functioning economy of images and transmissions, an economy of circulating speed.

14“Dromological” is derived from Paul Virilio’s term “dromology,” the study of speed. The root, he claims, is the Greek word *dromos* which means race, or to race, but can also me path or course.
The consequence of technological mediation is that perception, contemplation and knowledge formation occupy a new space between a subject’s consciousness and the object of consciousness. In fact, the notions of "perception" and "contemplation" are overcome by velocity and acceleration to the extent that they do not occur in dialectical relationships but only in one-sided technical space and technical time intervals. The Kantian notion of categorical conditions of possibility (in pure consciousness) are technologically mediated and, thus, not pure. The very possibility of rationalizing the interaction of human-technic relations in such a landscape requires a certain acquiescence to machinic mediation as a real part of the material environment, not as a technical process but as material fact impinging on both the Kantian subject and object. If a person views a technical artifact as a tool to accomplish an end, this simultaneously implies that the person has accepted the "given reality" as a field of action in which means and ends can be pursued. The act of rationalizing action in environments of speed certainly entails the triumph of instrumental, practical rationality but only to the extent that the hegemonic influence of speed is seen as instrumental.

Again, this notion of “rationality” should not be understood as the replacement of formal rationality by dromological rationality. Rather, it is necessary for social science to reconsider the notion of “efficiency” as the determining trait of the “formally rational,” which has its roots in Weber’s analysis of bureaucracy. (McIntosh, 1983, p. 102) In other words, it must be clear that in the hypermodern sense, efficiency as a concept is built on the material presence of hegemonic techno-speed and emerges from daily habits in bureaucratized technical settings. The concept of efficiency does not emerge from a social forum unaffected by technological influence, but the rationalization of “efficient means” is certainly a social outcome. The social, in this sense, the sense dominated by speed, is always already technological because the background
understanding of meaning takes into account the material presence of the existing technological infrastructure. Additionally, it is insufficient to only readdress the concept of efficiency without also retheorizing the way that Weber claimed bureaucratic techniques spread throughout society and become institutionalized. Weber claims that in modern settings of market capitalism, routinization “in quite essential respects, is identical with adjustment to the conditions of the economy, that is, to the continuously effective routines of workaday life. In this, the economy leads and is not led.” (Weber, 1958, p. 54) Let us update this concern of “effective routines of workaday life” from economic practices of labor to those of technological practices, or what I called in Chapter 1 “technological habits,” which are characteristic of hypermodernity. Kalberg wrote that Weber’s discussions on rationalization targeted Marxist overemphasis on the economic sphere and Weber held that “rationalization processes can take place in each arena independently from the others and at their own rates.” (1980, p. 1151) Given the ubiquity of technical influence made available by the expanded modes of post-industrial consumption, the rationalization of certain modes of behavior within technologized settings occurs by means of the “techno-routinized” subject’s way of life, which punctuates many arenas of modern society. Novel speed and novel devices become routine, commonplace and usually necessary from the point of view of the individual. It is from the perspective of this way of life, and the fact that so many simple actions require technical aids, that people rationalize the technical organization of certain social spaces, as well as corresponding social expectations, around “effective” technology. The very fact that so many practices are dependent on technical aids organizes social attitudes around “effective” routines of technological habit. In this, integrated technical systems lead and are not led. It is the grave condition of hypermodernity that different “arenas” of life are increasingly interconnected by technical means.
Accordingly, technological (and therefore dromological) rationalization of hypermodern lifestyles has joined formal rationality of the bureaucratic marketplace in the formation of what Ellul calls *The Technological System.* (1980) In such a technological system, “Technique as a system now structures modern societies, producing a greater and greater integration of each element (including humanity) as an object.” (Misa, 1988, p. 311) What Misa could not expressly point out back in 1988 was that “greater integration” takes on new meaning in the age of internet, digital communication and world-wide electronic networks. Integration is not simply a coordination of functions. It also implies the coordination of action in real time. All aspects of production, consumption, communication, innovation and deliberation operate under more “efficient” circumstances if they operate with real time information. Thus, we see that efficiency is subsumed under the relational logic of speed: the faster, the better, the more efficient, the more rational.

The next challenge for social scientists is to confront the dromological as a mode of social organization as opposed to focusing on the multidirectional social voices involved in the research, development and utilization of technology. The consequence of adhering to the latter viewpoint is locating technological “meaning” in the social ends served rather than what Anthony Giddens identifies as structuration. His theory of structuration brings to light the reflexive influence of material and institutional structures on society, and vice versa.

It is certainly necessary to insist upon the importance of such feedback relations in social theory. But the concept of ‘function’ is a hindrance rather than a help in conceptualising them. The notion of ‘function’ only has plausibility as part of the vocabulary of the social sciences if we attribute ‘needs’ to social systems….However, social systems have no needs, and to suppose that they do is to apply an illegitimate teleology to them. (Giddens, 1982, p. 10)
Assigning a function to a technology depoliticizes the technical, rendering its influence as a mere expression of social demands. What needs to be explored is specifically the way that the technological systems organize social behavior and expectations in line with the inferred demands of real time.

*The Dromological Cage*

According to Weber, the ultimate threat to Western civilization with the rise of formal rationality was being caught within the Iron Cage of bureaucratic functions. In this sense, human beings are reduced to the level of mechanical parts of a bureaucratic machine. The concept of action, through which values are practiced and reinforced, is hollowed and loses its substantive core. Rational action is only determined by the efficiency of hierarchy and administration. Weber says of the general concept of bureaucracy, “It is superior to any other form in precision, in stability, in the stringency of its discipline, and in its reliability.” (1978, p. 223) In Weber’s assessment, bureaucracy does generate a particular type of discipline and expectation of what counts as rational, but this is all relative to the ways that people have authority exercised upon them. Anthony Giddens argues that “Weber’s talk of ‘precision’, ‘stability’ and ‘reliability’ points to the direct connection between bureaucracy and mechanisation that he sometimes makes quite explicit…The formal rationality of technique applies with equal relevance to human social organization as to the control of the material world.” (1982, p. 202) We must remember, too, the material world is not simply the creation of consciously directed technical decisions. The material world of technology, of computer screens and transmissions, is not simply the canvas upon which we act, but also the medium through which we act, through which we increasingly connect with other people, and most importantly, through which we are made knowable to
governments. Human actors are subject to the rationality of the medium and, as Giddens points out, the medium is wholly implicated by the formal rationality of technique.

The ubiquity of technology in virtually all realms of modern life increasingly replaces a generalized discussion of “rationality” (which could refer to practical, theoretical, substantive, or formal) with a more specific image of technological society. Weber insisted that multiple rationalization processes interact and conflict with each other at all levels of social interaction, bringing diverse value-assumptions into contact with each other, and ultimately crystallizing into some sort of patterned rational-action orientation. (Kalberg, 1980, p. 1147) But now these multiple processes are brought into conversation with each other in a technologically mediated milieu. Are rational actions only those directed towards means and ends posited from the standpoint of deeply held values? Or, can we now see that rational action and rationality itself can be put into service of living in harmony with our technological environment?

Paul Virilio’s 1977 examination of the global effect of speed on geo-politics, *Speed and Politics*, lays out some of the key characteristics of the dromological cage/sphere I introduced above. But what is worth noting about my linking Virilio and Weber is that the technological is made explicit in my analysis, while in Weber’s Iron Cage, the technological is implied but always only one possible manifestation of formal rationality. In Weber, organization and the flow of commands and responsibility are always the rationalized expressions of modernity and organized around efficiency. Dissimilarly, Virilio’s description of the powerful impulse of speed-based thinking is tied to geo-politics, space, movement through space and power obtained by traversing or monitoring space. Bureaucracy is based around the flow of commands and orders, while Virilio’s notion of power is based around the flow of people, bodies and information. Weber’s formal rationality was limited to certain geographically isolated
environments (offices, factories, houses of parliament) but through the elevated importance placed on such institutions in modernity was able to expand to adjacent social spheres. The ubiquity of technology, on the other hand, introduces the rational logic of speed and efficiency into socio-technical space (which is almost everywhere), with the technical infosphere challenging the sovereignty of the physical geosphere in terms of relevance to human perception of the world.

According to Virilio, “the related logic of knowing-power, or power-knowledge, is eliminated to the benefit of moving-power- in other words the study of tendencies or flows.” (2006, p. 71) Here, Virilio is clearly drawing on post-structuralist thought but infusing motion, space and flow-rates into the central category of “knowing.” In fact, Virilio is filling a gap in the Foucauldian-derived literature by articulating the ways in which social knowledge is always geographic as well as techno-geographic. This is because, for Virilio, “motion, space and flow-rates” are all technological phenomena now that they are all measured by means of technical speed. He makes it clear that this political/epistemological development is also a technological development of devices that challenge the primacy of distance. The ongoing challenge to improve the study of tendencies and flows requires “the upkeep of the monopoly (which) demands that every new engine be immediately superseded by a faster one. But, the threshold of speed is constantly shrinking, and the faster engine is becoming more difficult to conceive of.” (2006, p. 70) Technological development is united with the formal logic of political, social and economic power-knowledge paradigms, while immediacy and speed are essential components of maintaining the rational order. In this way, “the (techno-knowledge) product is literally worn out before being operated, thus surpassing ‘by speed’ the entire profit system of industrial obsolescence!” (Virilio, 2006, p. 70) The concept of knowledge (as ascertained technologically)
is continuously threatened by information “being out-of-date.” This development makes
dromological rational logic all the more vital for maintaining power in speed based economic
and political orders. Like the hierarchical demands of bureaucracy, it becomes necessary for
people to buy into technical interconnectivity in order to retain power/knowledge in a speed
regime.

Dromological rationality and power/knowledge are forced into contact with each other in
the post-industrial present. Of course, adopting a certain rational perspective and being the
subject of surveillance are not inherently historically linked. However, in this particular era of
high capitalism, the Weberian and Foucauldian concepts become inextricably bound. Caren
Kaplan has suggested that the technical gathering of knowledge about subjects (especially
geographic knowledge) helps turn people into targets of various campaigns. “Who you are,
geographically, is a target- of marketers, governments, identity thieves, hackers and so on.”
(Kaplan, 2006, p. 697) However, it is only through our interactions with various technologies
(the everyday habits we practice through technical means) that we transition from subject to
target. The techno-target differs from the Foucauldian subject. Passive knowledge collection of
subjects is replaced by active participation (and conscious rational action) by targets in
information campaigns through willful (unavoidable) technological habits. The creation of
targets is a mobilization of subjects’ activity (travelers, consumers) that links human passions
with technological goods. (Kaplan, 2006, p. 704) It is in this way that power-knowledge and
dromological practices overlap in the technological sphere.

My overemphasis of technology, science, and speed generates a new perspective on the
issue of rationality in the hypermodern context. In particular, the way I combine elements of
Weber and Virilio may seem like an overly ambitious attempt to draw connections and
continuity of social thought over the 20th century. However, this all stems from my reading of Virilio. While some critics condemn him to the ranks of techno-fatalists or the neo-luddite school, others argue his conceptualization of speed is merely a series of loosely related post-phenomenological abstractions that oversimplify the complex relationship technology has with everyday life by reducing everything to the common denominator of speed. I disagree with both these assessments, and through an alternative reading feel that a dromological interpretation of rationalization processes brings to light the combination of rationality types in play in hypermodernity.

To summarize, the dromological interpretation of rationality is indebted to an inductive method of extrapolating from the mediation of everyday habits. It is for this reason that my analysis of human-technic interaction begins not with formal rationality, but with Weber’s designation of practical rationality. Practical rationality is the practice of mastering daily life on the individual level, embodied in problem solving and technical utilization of means to achieve individual ends. (Weber, 1958, p. 284) This form of rationality is not married to a higher, social-wide conception of “the good” or “the efficient” but rather focuses on the choices of individuals to master their own given realities. Through the creation of large scale technical systems, these attempts to master daily circumstances are simultaneously incorporated into the market analysis of a variety of industries (communication, credit, banking, security, advertising, transit). It is precisely because of technical speed that individuals can simultaneously function as individual actors but also act in full compatibility with the formal-technical logic of the interconnected realms of the market and social administration. It is only through Virilio’s analysis of speed that the simultaneity of practical and formal rationality can be explored in the hypermodern context. Since dromological analysis is the study of the relational quality of speed, it excels as an
inductive way to explore the relativity of the individual experience within the global technical context of countless coordinated experiences.

The synchronization of actions, responses, and perceptions through technology does not simply endow the fastest means available with the tag of efficiency. Rather, the way that people *orient themselves towards* other social actors and social processes presupposes that a certain attitude towards the social organization of time and space inhabits the background idea of what it means to be an active (and appropriate) member of the technically mediated culture. The meaning of human actions, saturated by a notion of efficient action, becomes obsolete and irrational when acting in opposition to speed of technical systems. The dromological penetration of action and thought processes leads to one inevitability: the re legitimation of formal logic as a pre- inscribed norm of technical reason. In the developed world, the cultural meaning of behavior becomes unimaginable without the pre-interpreted milieu of speed. And, technical, formal rationality reestablishes itself as a viable source of meaning in the world of commercial exchange, interpersonal communication, labor, and even leisure. Perhaps the Finns were correct. Perhaps society cannot function without the promise of perpetual acceleration.

Buying into formal rationality in Weber’s time was a localized social orientation that emerged in bureaucratic organization and began to slowly colonize other spheres of social administration. One obstacle to this spread of formal rationality was the limited technical capacity for human action to be coordinated through time and space. Thus, while formal rationality in Weber’s analysis was universally formal in its character of impersonalized “ends” pursued, a localized style of formality was determined by the means available and the social attitude towards those means. Being conditioned to the demands of technological speed is (increasingly) a global, endless endeavor. To resist the dehumanizing effects of being a cog in a
machine requires the reevaluation of means and ends. The effects of dromological progress extend as far as technology itself. The means of living (through technology) simultaneously become the ends of living (through technology.) The “end” of the dromological sphere is a self-generating drive towards acceleration. The rational solution to questions typically is to make the process faster and the only way to achieve this end is to introduce newer technological means. We are now in need of faster response times, faster internet connections, faster news coverage, faster production and faster travel. To reevaluate the ends of acceleration would be to withdraw from the overall infrastructure that enables modern life.

An obvious criticism directed toward my conception of dromological rationality is that speed and efficiency are not distinguishable from one another. From this perspective, nothing unique is occurring in today’s hypermodern world that wasn’t already presumed by the replacement of substantive rationality by formal rationality. In a substantive sense, means that achieve a socially meaningful end quickly are efficient. Likewise, formal rational means that function efficiently, regardless of an end, are considered more efficient if they function with celerity. In both substantive and formal rational paradigms, speed is subsumed under the umbrella of the meaning of efficiency. However, this interpretation of speed limits the understanding of speed to the rate of execution of some goal. Yet, when we consider that speed exists not merely in its instrumental capacity but also in its inherent capacity to productively link technical environment and their inhabitants, it becomes apparent that technical systems function very much as modes of social organization, which in turn contribute to the social processes of rationalization. In this sense, technical systems are much closer to a social structure like bureaucracy than they are to a set of means available. And, technical speed is much more
aligned with the bureaucratic method of organizing bodies and actions than with the end of “fast results.”

**Winner vs. Pinch and Bijker: What is the Social Construction of Technology?**

It is no surprise that technical objects are infesting the lifeworld with their technical code, mediating more habits and being received as increasingly indispensible. One of my main contentions about how and why technological mediation of everyday habits is becoming more frequent (and somewhat uncritically embraced) is the result of an erred interpretation of technology as mere tools. As rate of execution increases in most technological processes, people tend to view “wasted” time as something that needs to be overcome. Accordingly, people then view technology as a set of “tools” that can rectify the problem of wasted time. From this point of view, technical objects are seen as neutral and can be deployed in whatever way the individual user desires. However, it is also clear that such a view ignores how technical acceleration has started to organize social expectations and demands in line the demands of instantaneity. The way that technical objects function in unison in expansive connected networks influences the way that humans are able to form relationships with other social actors or social bodies. In order to shed light on the potential impact of viewing technology as mere tools, I now offer my comments on a debate in the philosophy of technology between Langdon Winner and a group of scholars whose work is loosely identified as the Social Construction of Technology school. At the center of the debate lies the value-neutrality of technology.

It is my argument that the social constructivist view of technology, while helpful in dispelling the notion of technological determinism, is inadequate at identifying the reflexive impact modern technology wields on society. The Social Construction of Technology approach
(SCOT) describes scientific development as “an alternation of variation and selection” which observes in the process some “interpretive flexibility” in determining the artifact’s functionality. In contrast to a linear view of the development and refinement of technology, this position argues that the development of new technologies must ultimately be seen as a multidirectional endeavor that constantly reevaluates the role a technology will play when it is ready to be used in the social world. (Pinch and Bijker, 2003, p. 227) Thus, in this view, when a technical device is unleashed its history and future use are “socially constructed” in accordance with the most appropriate guiding justifications in the artifacts’ particular phases of development and distribution. The constructivist view claims that scholars of technology need to analyze which preferences (or power relationships) have led to the creation and directed use of the given technology. This approach is what I call an “archeology of research and development,” aimed at identifying which social, economic and political voices were heard during the development process. (Pinch and Bijker, 2003, p. 227) In the constructivist view, the political aspect of technology rests in the specific constellation of social power relations that allowed the technology to emerge and be implemented. Through such analysis, they argue that we can explore the ways in which marginalization and oppression can be magnified or obscured by the use of a given technology.

The main opponent to the social constructivist position, Langdon Winner, provides a valuable critique of their general position, but he too frames his counter-argument in ways that constrict a more extensive understanding of “technology.” More specifically, the conceptual framework of the SCOT-Winner debate fails to penetrate the existential and experiential aspects of technology. Through my critique of these positions, I will argue that we must think of “social
construction of technology” as being presupposed by the transformative capabilities of
technology itself; or, that the “social” already is technical in its very constitution.

My argument regarding the SCOT approach is similar to Langdon Winner’s in tone. Winner and I both argue that such views overemphasize historical interpretation of social impact at the expense of present analysis and the emerging impact of modern technology on the social. More specifically, historical interpretation of technology must not overemphasize the social impact on technology without a reflexive understanding of the ways that technology has had an extemporaneous role in shaping the social values at any given time. The study of how a technological artifact emerged, and the power relationships that are translated into its development, are a necessary part of political technology studies. Neither Winner nor I would deny that. Nor would we deny that the social use of tools endows technical artifacts with specific cultural meaning that can change from context to context. However, where I diverge from Winner's stance is with regard to the future-oriented aim of the philosophy of technology. Winner argues that technology scholars must answer the moral imperative of providing responsible and ethical positions with regard to the future use of technological devices. (Not coincidentally, this is where many of Winner's critics focus their arguments. Most notably, see Elam (1994) or a collaborator of Bijker, Aibar (1996)) While I acknowledge sympathy with Winner's accusation of social constructivist moral relativism, I disagree with his assumption that the study of technology must address issues of political and moral justice through a debate on future use and policy. Policy discussions of “use” seem to imply that experts can achieve some sort of critical distance from which to discuss hypothetical instrumental uses of technical artifacts. I also think that Winner’s critics respond poorly by engaging in his debate and thereby overemphasize their own relativism. In short, the debate
surrounding Pinch and Bijker, Winner, Mark Elam, Steve Woolgar and many others distorts the study of technology around moral (un)neutrality which need not be the primary point of contention.

The technological “problem” cannot be grasped by solely focusing on the instrumental qualities of neutral artifacts. We cannot imagine technological devices as dormant objects just awaiting the deliberate usage of a subject or social body to monopolize its potential. There exists in technology power that is inherent to the objects themselves.\(^\text{15}\) This power is transformative and this power is equally capable as social forms of power to participate in the formation of surface reality and the play of social power relations. “Individual habits, perceptions, concepts of self, ideas of space and time, social relationships, and moral and political boundaries have all been powerfully restructured” by technological forces. (Winner, 1988, p. 9) In focusing too closely on the directed social use of speed based machines, constructivists cannot account for the ways (notably, spatial and temporal) in which speed affects subject, object and bystander alike. Hence, constructivists cannot account for the encompassing networks of speed that predetermine the spatial and temporal relations between techno-subject and techno-object, or better, between the constitutive parts of the socio-technical system. They only acknowledge who can export speed. Or, even more misleading, they may identify technical speed as an independent variable capable of exerting force onto society, yet they misidentify the inherent power of techno-speed

\(^{15}\) Jane Bennett’s article on the issue of “thing-power” focuses on the force carried by material objects. (2004) She writes “What is manifest arrives through humans but not entirely because of them: we bring something from ourselves to the experience, and so it is not pure or unmediated.” (p. 358, 2004) This is especially true of technological objects since they are humanly created yet simultaneously generative of social context. However, Bennett remains more optimistic than I. She maintains that the thing-power of objects can produce an “uneasy feeling of internal resistance” since humans are also a constituted materiality and this contradictory interaction between materials refuses to align itself along traditional subject-object relations. She views this as “profoundly productive.” (p. 361, 2004) I fear that the materiality of the human subject has lost the ability to produce uneasiness, especially when coming into contact with ordinary things, since both human and artifact are caught up within the networks of speed, technological circulation, production and consumption. We as humans can no longer bring the same negativity to the subject object relationship since there exists a technological relationship between all phenomena. The common denominator of the technological relationship pacifies the shock of the new.
as merely the consequence of choices made by people acting within social, not technological, networks of power.

Winner argues that "it is incumbent upon a writer not only to describe, analyze and interpret but also to let people know what he or she makes of these technologically embodied ways of living." (2003, p. 615) Winner's stance was blasted by Elam as disguised liberalism and a mistaken quest for moral and ethical truth. (1994) Eduardo Aibar adds "Either Winner is under the philosophical illusion that a marvelous magic wand can be found in a privileged theoretical position, or, worse, he thinks that social groups involved in technological controversies need expert advice about their moral or ethical concerns." (1996, unpaginated) I object to both Winner’s argument and the social constructivists’ counter-argument. As they are both rooted within the framework of morality, they both seek to locate the “question concerning technology” in agency. Human actors and technical structures are conceptually pushed further apart by this view, with “use” or “agency” acting as a wedge in the middle. Winner wants to locate the study of technology in policy makers, scientists, and informed citizenry. The social constructivists want to locate the imperative of non-identity and non-judgment in the social scientists themselves. Furthermore, the moral framework of the debate demands that we isolate individual technologies and devices and try to account for the moral repercussions of their employment or try to demonstrate the way that its multifaceted use-value transcends moral determinism. Observing the effects of individual artifacts or processes obscures the larger scope of the "technical system." Virtually every urban situation in post-industrial society plays itself out in the presences of massively complex technological systems, from communication networks to utility networks. Technology links environments and "the technological" is increasingly ubiquitous. The very formation of social attitudes on which people would rely to make moral
decisions is inscribed by the “technological” and reinforced through technical habits. Cultural and individual memory, imperative to the formation of moral opinions, is embodied, stored, transmitted and transformed by the technological milieu. People cannot discuss the moral and political implications of individual artifacts without addressing the larger technological context (in which we exist and simultaneously absorb and assign social values) as a whole.

With this shortcoming of the “moral argument” in mind, let us return to Aibar’s criticism of Winner to explore another implication of the way the debate is framed. Aibar writes, "First of all, technology is embedded in society from its very first stages of development and not only in the diffusion stage. Secondly, and as a consequence, values and other social constraints do play an important role in the shaping of technology as well as the use of new artifacts, and the course of events in controversial technology issues can also influence values in significant ways."

(Aibar, unpaginated, 1996) Aibar does a nice job of bringing to light a key issue: technology controversy can also influence values in significant ways. While Aibar is correct to assert the reflexive transformation of social values, he makes a terrible assumption. He argues that it is controversial moments in the history of technological policy, research and development that lead to the subsequent transformation of values. Of course this is true. After the horrible effects of pollution were grasped (or denied!), energy policy was reconsidered with a new social consciousness. In the aftermath of various nuclear episodes, the social norms concerning technology were reshaped. However, it is not solely in these controversial moments loaded with historical gravity that values are shaped by technologies. It is in the everyday. For instance, functioning within the highly technological environment of the workplace requires constant re-articulation of social values with regard to the use of technology. Workers alter expectations of what is appropriate. New forms of “appropriate” communication are adopted through the
ongoing practice of working with technological devices (text, email, instant message, and even voice mail). Another consequence is the acceptance of trade-offs in terms of privacy. It is not only at controversial times that social values evolve. Perhaps it is only at monumentally controversial moments when we are overtly aware of it. Another way to rephrase Aibar's argument is that every day is controversial and the “everyday” is the outcome of human-technic interaction. To acknowledge the controversy of everyday activity and everyday assumptions is not to label every activity as potentially amoral or incorrect. It is simply to acknowledge the human-technic relation (not agent-instrumental tool dynamic) at the core of hypermodern life. Unlike Winner or the social constructivists, one should not assume that the transformation of moral values will always be self-initiated or self-evident. To make such assumptions is to reject the reality of human-technic relations. In the next section, the notion of “technology” is supplemented by an analysis of the relationship between modern “technology” and “the social.” This relationship is played out in the mediating relationship of speed, reshaping space and time, and ultimately aligning both individual and collective understanding with the techno-temporal dimension of these systems.

Conclusion

This chapter has proposed that a fundamental rethinking of the relationship between technology and rationality is necessary. This is highlighted, but not necessitated, by the basic observation that technological speed plays a role in how people approach the technically mediated habits of daily life. Simply, the object of analysis for this chapter is not rational behavior, but rather rationalization processes. I do not strive to explain how behavior A or behavior B is more or less rational. My emphasis on the social processes involved in the
emergence of rational paradigms is compatible with a much more sophisticated understanding of technology than thinking of it as a set of tool-like instruments. The social organization of ideas and assumptions is an ongoing interaction. And it is an interaction that I believe is becoming more socio-technical which undermines a purely a priori understanding of “the social.” The process of rationalization must not be conceived through static nouns like “the social” and “technology.” The organization of human assumptions and beliefs is a dynamic process that would be better served if conceived through other dynamic processes: “socialization” and “technologization.”

My project seeks to undermine a social constructivist view of technology by overcoming the value-neutral theory of technology but embracing a critical understanding of the social construction of space and time. David Harvey (1990, p. 419) describes the changes imposed on concepts of space and time so that such concepts can better accommodate modes of social reproduction. Space and time define (or frame) the field of social action and social habit. Since society “organizes its material practices in accordance with those concepts,” space and time must be malleable given the constant changes and reinterpretations of modes of social reproduction. (Harvey, 1990, p. 419) To this analysis, I think it is essential to add the notion of technologization of space and time. Since it is through technology that we regularly engage the world and surrounding environments, and technology is absolutely fused to our modes of social production, the production of space and time must simultaneously be considered to be the technological structuring of space and time. When the social constructivists argue that “the social” shapes the meaning of the technological, I will remind them that the social is already always technical in the first place since it (social process) plays out in spatial and temporal
contexts influenced by technologization. The social decision-making apparatus is always conditioned by the spatial, temporal and technological logic of the era.
Ch. 3 Speed-Polluted Spaces, Speed-Polluted Bodies

I think that the infosphere- the sphere of information- is going to impose itself on the geosphere. We are going to be living in a reduced world. The capacity of interactivity is going to reduce the world, real space to nearly nothing. Therefore, in the near future, people will have a feeling of being enclosed in a small, confined, environment. In fact, there is already a speed pollution which reduces the world to nothing. Just as Foucault spoke of this feeling among the imprisoned, I believe that there will be for future generations a feeling of confinement in the world, of incarceration which will certainly be at the limit of tolerability, by virtue of the speed of information. If I were to give a last image, interactivity is to real space as radioactivity is to the atmosphere. (Paul Virilio interviewed by James Der Derian, 1998a, p. 21)

Virilio’s language is often littered with the imagery of war and the metaphorical debris of technological disaster. The “infosphere” he describes above is compared to radioactivity, penal incarceration, and the crushing force of an exploding “information bomb.” The infosphere, as Virilio describes it, acts (through speed) to decay “authentic” experience and to enclose the everyday practices of life in networks of technologically captured information. He claims “We are going to be living in a reduced world.” Yet, what exactly can we take from this when terms like “reduced world” are unclear phrases? This chapter is designed to contextualize Virilio’s dromology and, in doing so, help to clarify the implications Virilio makes about the concept of an imposing “infosphere.” Virilio is a prolific producer of books and articles. Yet, in the voluminous collection of Virilio’s writing he never simply or clearly defines what he means by “infosphere.” Perhaps he intended it to be nothing more than a passing observation in the context of an interview with James Der Derian. But, I think that the concept of an “imposing infosphere” which threatens the unmediated geosphere could be a valuable concept to develop in political studies of space. This chapter is my attempt to construct a heuristic conceptualization of an infosphere and the socio-technical processes that are involved in its imposition onto the geosphere. In Chapters One and Two, I introduced some of Virilio’s work and some of the
ways I am indebted to his diagnosis of the technology and speed. However, in this chapter, I am
going to directly engage his work, highlight our points of divergence and construct a
conceptualization of “infosphere” that he never did. My reconstruction of this concept draws
mainly on Virilio’s diagnosis of speed (in particular, his work on the relationship between
technology, speed and war), Bernard Stiegler’s reinterpretation of human-technical relations, and
my own Heideggerean analysis of speed and information.

This chapter occupies a crucial space in the scope of my overall project. In earlier
chapters, I argue society actually copes with the acceleration of technical processes by
rationalizing the instrumental use of technologies, but at the cost of ossifying technical systems
as “given realities” subject to instrumental mastery which simultaneously reduces any
conception of human-technical interaction to only an instrumental capacity. In later chapters, I
wish to explore further the political consequences of rationalizing speed regimes by focusing on
a paradigmatic example of an infosphere: airports. Before I can move on to a case study analysis
of airports, I must detail the qualitatively different spatio-temporal characteristics of the
infosphere of real time. In particular, I must take a brief moment to address how my
conceptualization of hypermodernity is positioned with respect to temporality, particularly the
notion of history. Earlier, I stated that hypermodern spaces are spatially significant
developments in social life, but that they must be conceptualized as partially independent from
this particular historical era. There are two reasons for my position. On the one hand, the
internal dialectic of hypermodern spaces and hypermodern subjects is not historical. I borrow
this notion of the historical dynamic of space from Marc Auge. On the other hand, the
organization of the hypermodern existing in time does not conform to a linear or teleological
form of history. These technical constellations are not the embodiment of a certain historical era
or stage of technological development. I argue that the organization of these spaces is defined not by the technology available at this historical juncture but rather by the socio-technical attitudes directed towards tempering uncertainty in a future sense. In this sense, these spaces are hardly spaces manifesting historical progress. They are spaces of preemption.

All this will be discussed in further detail in later sections. But, for now, a brief note of introduction will help both to prepare the reader and to introduce some key themes in the literature of Auge and Virilio. In Auge’s thesis on supermodernity, “non-places” are described as zones of instructions, procedures and instrumental purpose. In these places, people tend to experience solitary interaction with the instrumental qualities of the space itself. The space is merely a means to an end. I think it could also be argued that the subject in the space is also a means to an end (typically, the end of consumption or similar process that is completed and then exited.) Auge argues that these non-places are organized in a way such that the subject of the space is too preoccupied with the present moment to form personal connections to other people or a personal history with the place itself. Technological interfaces, which dominate the attention of the subject, contribute to this effect. The hypermodern space, preoccupied with identification, restricting and granting access, and surveillance, involves a very similar phenomenon for the subject.

Not only is it important to explore the hypermodern as a mode of experience, but it is also crucial to explore the historical implications of the hypermodern as a type of emergent space. In later sections, I go to great lengths to describe the notion of “infosphere.” While I borrow the word from Virilio, he doesn’t expound on the concept. I construct a theoretical tool to describe the way that space is organized, defined by circulation of information. The general characteristic of the infosphere is that the production of this type of space is an active form of production. In
contrast to the goal of surveillance (to make things knowable, visible or legible), the infosphere is concerned with making the entirety of its space actable upon. In this regard, the circulatory nature of information is not for learning, archiving, or establishing a historical frame, but rather to make future action possible (i.e., preemption.)

Returning to the above quote, Virilio argues that as the frequency of information flows increases to mediate more and more social actions, the resulting “pollution” will be experienced by sensing that our actions are presupposed, preceded and always-already anticipated through webs of technological dependency. According to this view, rather than a feeling of liberation at the thought of my personal actions resonating in different geographic locations (an email to China, an online purchase from Portugal, or watching Vietnamese cable in an Oregon diner) I will always experience tension with the fact that people now inhabit information-circulation over physical location. And, in this argument, Virilio makes one of his primary tenets clear. Virilio bases his phenomenological analysis of speed on the assumption that the performance of “real” or “meaningful” action must occur within the perceptual limits of the human body. Technical speed and technical transmissions exceed those limits. For him, “reduced space” and “real time” eliminate the human body’s place in the world and limits its capacity to perceive and act in local space and human time.¹⁶ My proposed definition of hypermodern experience is formulated specifically to move my project away from this assumption that meaningful experience or authentic experience is only possible if it occurs within the perceptual limits of the human mind.

¹⁶ The focus of much of Virilio’s work amounts to a crisis of truth and a catastrophe of perception. “Representation, whether modern or postmodern in conception, aims at creating a clearing for understanding, that is, aims at localizing (a) truth by means of an oral or written sign. Until now, debates regarding representation have centered on the ability of the sign to retain its referentiality. Both the Idea in Plato or Husserl, and even the trace of the Idea in Derrida, rely on there at least having been a time and space for the sign. The degree of 'truth' these concepts bestow remains the point of contention. But for either camp, truth needs time and a place to accrete to itself and become concretized. And for Virilio it is precisely this which is no longer possible…” (Hanes, 1996, p. 187) However, by focusing this chapter on “infospheres” I am actually attempting to tackle the political and social consequences of speed as it manifests itself simultaneously in physical space and the space of technical transmission. Thus my focus is on the qualitatively transformed conditions of experience, not representation or truth as such.
This is not to say that categories such as “reduced space” and “real time” are not worthy of exposition, but a black and white dichotomy between mediated experience and unmediated experience fails to adequately address social reality.

In earlier sections of this project, I argue that the technologization of habit and the proliferation of consumer technologies have contributed to the emergence of a social necessity to embrace the dromological by means of rational appropriation of speed. This embrace of certain technical means leads Virilio to conclude the relationship people have with space and time will be irreversibly altered. There is no denying that the human relationship to time and space has changed given the innovations in communication, transportation and satellite technology. However, I argue that by adhering to the demands of speed-based thinking, we adopt dromologically enhanced notions of efficiency and rationality in order to cope with the intensified excesses of speed and the reduction of local space/acceleration of time. In this way, the “space” of experience is rationally conceived as the physical proximity to the technological device, not a reduced space. The “time” of the technically mediated experience is measured in the instrumental quantity of the rate of execution. Society rationalizes the consequences of speed and rearticulates speed as instrumental rather than relational.

To reject or to resist the ends of acceleration would be to withdraw from the overall infrastructure that enables modern life. Hence, while Virilio asserts that the increasing “pollution” of the infosphere will instill a sense of confinement into all peoples, I argue that hypermodern rationalization processes have already begun to counter this sense of imprisonment by accelerating human expectations to cope with this phenomenon (albeit a coping mechanism that severely limits political possibilities). By rationalizing technological habits, people elevate a subjective sense of instrumental time (the time of the “user”), but fail to grasp the objective
technologization of time (which could be called the time of the infosphere and in which people are always already implicated.) The very act of rationalizing dromological ways of life as a *form of rationality*, precludes the possibility of a sense of confinement. In believing in the legitimacy of a perspective set of beliefs as rational, people do not find anything limiting about living in the infosphere. It would only appear rational, appropriate and necessary (or as a rational set of technical conditions.). However, I agree with Virilio’s assumption that something deeper, on an experiential level, is distorted and dangerously obscured by the speed pollution of the infosphere.

The goal of this chapter is to explore the objective qualities and consequences of acceleration in an infosphere. Virilio claims that the infosphere will impose itself on the geosphere. Therefore, he assumes that the infosphere is a unitary collection of global information flows. Adopting this view robs the theoretical concept of its social and political context. I argue for a view of multiple infospheres beginning to populate the landscape of the developed world. I define an infosphere as an actual physically enclosed place or building, such as an airport, bank, or government buildings. These sites are all identified by circulating information through electronic and digital hardware, high levels of active surveillance and interconnected database structures linking people in the spaces to information about them. Passage through or performance in these areas is permissible only if the inhabitant provides the requisite information to the infospheric structure (providing information documents, providing ID or PIN numbers, verifying passwords, presenting biological evidence). The information flows creates a type of technical distance and duration that challenges traditional conceptions of subjectivity (or at least the processes of subject formation). This leads to the hypermodern phenomenon of a dual-structure of human-technological experience.
The Imposition of Speed

What is interesting is the violent imagery that Virilio employs to describe a sense of “confinement.” “The infosphere…is going to impose itself on the geosphere.” He anticipates a violent imposition and a violent appropriation of both local space and experience of time by circulating speed. Beyond my earlier definition of speed (that speed constitutes the relation between phenomenon), the above Virilio passage asserts that speed pollutes both time and space in a violent way such that speed is the mode through which life is experienced as confinement. As Virilio writes elsewhere, space “is never exactly traversed but rather perforated, brought to light.” (1998b, p. 15) This image of perforation demonstrates that space is not an empty container in which human activity takes place, but rather an experience itself that technical speed can reveal in a particular way. By inhabiting a physical space but simultaneously occupying the space of information flows, acting or reacting through time and space at great speeds, the meaning and functionality of the space is “brought to light” in multiple ways. Technologically mediated experience happens in a dromological way, in sync with the technological means of being “mobile.” Yet, we must remember that in the infosphere, transmissions, codes, radio waves, phone signals, and internet connectivity are always already puncturing the here and the now. This violent perforation of space and time by technical time is the actual condition of possibility of experience in hypermodernity, so that space (and therefore, temporal experience) must be understood as perpetually shifting, reorganizing and disrupting the social. Or, looking at it from the point of view of human-technic relations, experience is dual, simultaneously subjective and technical.
In his essay “The Overexposed City” (2004) Virilio argues that the development of interactive technologies has forced historical time to give way to time that expresses itself instantaneously. (p. 274) In this condition of interactivity and virtual electronic presences, people inhabit (experience) transmission (not space) which means that, by definition of “transmission”, nothing settles (at least not in traditional spatial or temporal realms) “leaving no foothold or foundation on which a chain of meanings can accumulate.” (Hanes, 1996, p. 188) Constant activity and incessant exchanges between virtual substances are represented instantly on screens, rather than in lived space. (Virilio, p. 279) In other words, the way that inhabitants of an infosphere experience the present is always partially revealed through the despatialized and detemporalized condition of inhabiting transmission. This is not to suggest the elimination of embodied, physical experience or any of the subjective interpretation that accompanies embodied experience. However, it is clear that, through technology, the infosphere enables a dual structure of simultaneous experience (one marked by the phenomenological experience of individual intuition and, simultaneously, the other marked by technological experience of the electronic and digital (extended or prosthetic) experiences of subjects that only exist in real time, void of memory, history and context.) It is only by understanding this dual structure of human-technical experience in both subjective and technical terms that one can begin to understand the infosphere.

A brief description of the dual structure of experience is needed before I can proceed with the rest of my analysis of infospheres as the condition of possible (dual) experience. This is especially pertinent to modern society since mobility, communication, networking, and distribution have all increased in scale. Take for instance a stop sign. It may seem odd to consider a stop sign an artifact there to be “used.” In its most strained sense, one “uses” a stop
sign as a guiding tool, though a much less involved use than, say, a compass. A compass requires careful observation, measurement, bodily orientation. A stop sign, on the other hand, is approached while most of the driver’s attention is on other traffic rather than the sign itself. In a small way, the stop sign is a tool that a person uses. But, that person would be blind to think that their experience of interaction with the sign was limited to the act of stopping and continuing down the road. The interaction with the stop sign is simultaneously an introduction to the experience of engineered roadways, the legal system of the roadway, and a form of communication with other drivers. The outcome one achieves through the interaction of the stop sign in one level of experience (to use as a guide.) The simultaneous other level of experience is not predicated on momentary “use.” It is an experience of the wider bureaucratic, legal, technical and cultural rules of the road.

Now, apply this logic to a hypermodern setting where information circulation is not simply a second level of experience, but the primary goal of the system itself. For instance, one can walk into a bank and cash a check which affords them the opportunity to meet with their banking representative, discuss the transaction, and physically experience the process of exchanging money for a check. When this experience is performed through the mechanisms of real time online action or remote ATM locations, the patron does not get to experience customer service, a sense of the bank’s security measures, or the feel of check or money in hand. All that matters from the point of view of the banking system is that a transaction occurred. By rationalizing the banking experience in its electronic version, the technical banking system elevates the role of the electronic transaction and minimizes the experience of the subject as customer. These sorts of shifts from embodied subject to electronic versions affect the way individuals perceive their place in world and require a certain, technologically informed
rationalization to make sense of this change. An example of such a rationalization is for a banking customer to simultaneously equate the security of a bank vault and an internet page. And, I reiterate from Chapter Two, this emergence of the dual experience compels human society to overemphasize the subjective experience of “using technology” rather than technology as a mode of being. Of course, it is this sort of social acceptance that justifies the continued emphasis on the technical as an entry point to “the real.” As a consequence, the realm of technical systems and technologized settings is increasingly accepted as “given realities” around which people must organize their lives.

At one point Virilio describes our era, the post-industrial, hypermodern era, like so: “After the recent breaking of the sound system and the heat barriers, our era is the first to reach its cosmological speed limit with the breaking of the light barrier…more precisely, of history’s upper speed limit…” (1998a, p. 158) According to Virilio, this marks a crucial development in phenomenology. Significantly, the breaking of the light barrier and running head first in to the “time barrier” is an evolution in information, or an evolution of the possibility of knowledge about the world. The “light barrier” has been broken by technologies that are able to transmit information at the speed of light. The use of these technologies in social settings requires certain sophisticated reciprocal technology that can receive, interpret and present the information to human users on the other end of the process. This process means that the experience of elapsed time is superseded by real time. Real time constitutes the “time barrier” itself. The worldly standpoint of established distance and experience rooted in the time of the ego are broken and repaired by the renegotiated standpoint of light speed technologies. Distance and time could now be conceptualized in dimensions that only technical tools could measure. The only recourse that people would have in grasping the distances covered at the speed of data
transmission waves was *through* the information presented to them. In a sense, conquering distance (through transmissions) and running into the time barrier of real time is an informational experience. Like the example I outlined above about the experience of banking, Virilio describes the circulation of information as the key reference point for experience. Just as the dominant point of reference for the bank customer is the transaction instead of the bank, Virilio argues that dominant point of spatio-temporal reference in the reduced world of technical systems is the presentation of information, which is available for human consumption.

The dataspace of pure information exhibits a tension with social and cultural meaning. The dataspace provides resistance to any human “negotiation” or “interpretation” that requires a local, anchored perspective. (Hansen, 2004b, pp. 95-96) While other scholars have analyzed and utilized Virilio’s work on such points as the possibility of negotiating truth or meaning (see Hanes, 1996 for example), I think it necessary to explore the dataspace, in certain settings, as the very conditions of human-technic experience. A narrow examination of Virilio is at risk of concluding that society has the ability (or has lost the ability) to change or modify the conditions of experience through negotiating social meaning. In Chapter Two, I argued that it is precisely this negotiation of social meaning that overemphasizes the instrumental quality of speed as a tool while simultaneously obscuring the relational aspect of speed, meaning speed as “connectivity.” Hypermodernity is that state of existing in an excess of speed which determines the conditions of possible (dual) experiences. The hypermodern dual experience is delimited both by social rationalization and also by the limits of technical acceleration. Therefore, I argue that technical acceleration is both a social tool to maximize efficiency and a forceful imposition on the space and time of the human experience.
Virilio, War and Speed as the Imposition of Information Structures

Virilio states, “History progresses at the speed of its weapons systems.” (p. 90, 2006) I believe that Virilio uses the word “history” as a social concept to denote something like the “history of political governance and political power.” When he writes “History progresses” he means that the history of political organization and political power is tied to the evolution development of war strategy and military capabilities. Ian James clarifies Virilio’s position on this issue:

For Virilio war is first and foremost a matter of logistics, that is, the procurement, maintenance and distribution of weapons, materials and personnel, as well as the overall management and strategy of armed conflict. He is primarily interested in the space of war, the movement of armies, weapons, material and information through that space, and the manner in which military space then comes to shape social and political space. (James, 2007, p. 68)

After addressing the general correlation Virilio establishes between war, politics and space, James continues by summarizing some themes in Virilio’s first major treatment of war and politics, Bunker Archeology:

If war is conceived as primarily a matter of an artificial construction and strategic use of the space of the environment then the fundamental role played by military planning in the shaping of social and political space becomes clear. (James, 2007, p. 71)

In the post-industrial democratic context, it is my argument that the “strategic (political) use of space” is the technical organization and monitoring of space in an effort to transform objects and bodies into knowable entities that can then be analyzed as discrete pieces of electronic information.

The historical evolution of war and strategy has always been one of the violent impositions of strategy onto an enemy or a battlefield. Weapons systems are specifically
designed for such a purpose. Even more provocative is that strategy, calculation and logistics are an expression of “power” aimed at a possible future. The idealized future from the standpoint of science and the military is nothing less than the imposition of strategy onto reality itself to eliminate the unpredictable. Like Husserl and Heidegger before him, Virilio cannot ignore the “claustrophobic” imposition of calculation and strategy onto the life world.

From Virilio’s insistence that history is tied to war (or at least our weapons systems), we can deduce that in his estimation history is not a progression of moments, but rather an index tracking the stages of imposing strategy onto the world, tracking the “reduction” of the world through making it knowable. Mark B.N. Hansen notes that subjective individual experience of speed can be thought of as “an index of the impact of technological change.” (2004b, p. 102) The way that Virilio describes the evolution of war mirrors this idea of an “index” of impact. However, he does not describe war in terms of physical impact or explosive impact of weaponry; rather, he details the invisible, immaterial impact of technology on the space of war itself. Through technological devices, the battlefield is brought under observation. But, this isn’t merely the illumination of a neutral location. The imposition of the technical creates a new form of space, dominated by sightlines, vectors and trajectories. To exist in such a space is to exist in it “strategically.” The field or forest or sea is actually transformed into a new kind of space: a battlefield where technical perception supplements, even dictates, human perception. This space has new meaning, not solely because the inhabitants of the space find themselves in conflict, but also because they find themselves imposed upon by technical means of perception.

In Virilio’s terms, the history of war is the historical development of means of perception, or the “logistics of perception.” International relations scholar James Der Derian has written extensively on Virilio and describes the themes of Virilio’s 1984 book War and Cinema as such:
“All economies of sight and might, remnants of presence like quattrocentro linear fields of perception, national-territorial politics, Cartesian subjectivity, Newtonian physics, become coordinated, and eventually subordinated by a relativist, quantum, transpolitical war machine.” (Der Derian, p. 10, 1998)

To make the enemy known is to make their position and placement knowable. In order to achieve this, the “logistics of perception” emerged to make possible visual knowledge from impossible vantage points (and at impossible speeds that defy human perception), thus putting our epistemological “remnants of presence” into service of the technological.

**Actio in Distans**

So, how does the evolution of technology (or even weapons and strategy) constitute the social history of speed? How are we to account for Virilio’s claim that history and the development of the means of war are intertwined? In his essay, “A Traveling Shot over Eighty Years,” Virilio discusses the development of war, speed and politics in the twentieth century, using the 1904 Russo-Japanese War as his commencement point. He points out that the 1854 siege of Sebastopol (Crimean War) would have been an equally valid point of departure, but he opted for 1904 for two reasons. First, this war made the first use of the industrial searchlight. Secondly, the Wright brothers got airborne in 1903. The combination of industrial means of perception with the loosening of the geo-centric anchor of perception was seen by Virilio as a critical development in the history of human perception. (p. 95, 1998)

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17 The essay “A Traveling Shot…” is actually the final chapter of Virilio’s book *War and Cinema: The Logistics of Perception*. James Der Derian’s goal in compiling *The Virilio Reader* was to provide of series of insights into each of Virilio’s major works by using his discretion to select the “key” chapter. According to Der Derian, the importance of this chapter is that it demonstrates the connection between the emergence of the “logistics of perception” and what Virilio calls the “aesthetics of disappearance.” The aesthetics of disappearance (referencing Virilio’s 1980 book of the same name) demonstrate how politics is no longer willing or able to differentiate between the real, the visual and the virtual, and hence “disappears” into the aesthetic. (See Der Derian, p. 10, 1998)
Throughout this essay (“A Traveling Shot…”), Virilio outlines the emergence of the logistics of perception as the co-evolution of military surveillance tools and tactical optics with the development of new modes of perception which mass publics absorb through information consumption. In the early part of the 20th century, the technological range of weaponry imposed itself on the space of the battlefield. (Machine guns and small arms extended the area of combat, while poison gas turned the entire environment (air included) into a war zone.) (Sloterdijk, 2009, Interview) This created a necessity for new modes of perception as “the idea of war as fundamentally a game of hide-and-seek with the enemy was proved to the point of absurdity in those First World War earthworks where millions of men were entrenched.” (Virilio, p. 96, 1998) The flippant comparison of a gruesome war to a children’s’ game aside, Virilio has pinpointed the social and strategic necessity of why particular sense-enhancing technologies have developed at given times, not to mention the evolution of technical means to envelop entire geographic regions under its grasp (be it poison gas or bathing the entire region in electric light). While this serves Virilio’s purpose of explaining his theoretical subject (logistics of perception) it is not a sufficient explanation of either the emergence of the “infosphere” or its imposition onto the geosphere. However, I think Virilio’s work in “A Traveling Shot…” does contain a dormant and overlooked expression of technological imposition. He writes:

In the wars of old, strategy mainly consisted in choosing and marking out a theater of operations, a battlefield, with the best visual conditions and the greatest scope for movement. In the Great War, however, the main task was to grasp the opposite tendency: to narrow down targets and to create a picture of battle for troops blinded by the massive reach of artillery units, themselves firing blind, and by the ceaseless upheaval of their environment. Hence the multiplicity of trench periscopes, telescopic sights, sound detectors, and so on. The soldiers of the First World War may have been actors in a bloody conflict. But they were also the first spectators of a pyrotechnic fairy-play whose magical, spectacular nature some of them could already recognize. (1998, p. 97)
This quote hints at the simultaneous structure of dual experience, subjective and technical. The soldiers were both actors in networks of the technical space of the battlefield (troop formations, artillery trajectories, trench networks) and subjective spectators incapable of grasping the enormity of war as they “fired blindly.”

The building of watchtowers, illumination by spotlight, aerial photography and satellite imagery all represent different historical stages of the same strategic desire. Like the optics used by troops in the trenches, the ultimate goal is to make the enemy and the battlefield knowable while remaining invisible, hidden or safe. In order to make knowable without direct human inspection, the battlefield must be put under the watchful gaze of technology at a distance. This corresponds to a desire to illuminate, make readable and make the unknown actable upon. In their own way, each of these technologies capture, reformats and transmits information about the geosphere to the actors involved in the conflict. Through illumination, exposure or transmission, the geosphere is placed under the watchful gaze of the information gathering techniques, which is then reformatted in the form of military models or drawing boards or simulations and exchanged amongst the military brass, a safe distance away from the fighting. Strategy is simultaneously in action in the command center, on the battlefield and in the waves of information that move between the two.

German philosopher Peter Sloterdijk, who like Virilio is known for his work on war, summarizes this situation perfectly: “There is constant movement from the Gutenberg world to the radio world: the world of waves and the world of print are systematically linked by a common feature, which, to put it in classical terms, is actio in distans – action at a distance.”18 The history of weapons systems, war, and technical speed is the historical evolution

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of action at a distance. This is concomitantly the historical evolution of the dual structure of experience and the gradual emphasis toward the experience of technical networks over subjective first person experience.

The simple introduction of optical and sensory aids did not simply capture information about the enemy, but also presupposed the actions of the enemy. The very act of trying to escape the grasp of visual technology was already a technological experience, a reaction to actio in distans. Perhaps it is in this way that Virilio’s controversial attribution of an internalized sense of confinement by inhabitants of the infosphere can finally make sense. However, Virilio’s accompanying claim that real space will be reduced to nothing is absolutely false. Actio in distans- the physical distance of the geosphere is precisely that which enables the creation of technical distance. The utility of transmitted information is nullified if we can gain the same knowledge through direct perception. Thus, the geosphere is in no way reduced. Rather, the geosphere serves as the actual means through which the technological can conquer the geosphere. It is imperative that philosophers and social scientists never ignore the fundamental importance of the physical world of distance or its relationship to technology. Lest we forget that the aim of twentieth century warfare was to impose one’s will from a distance. Nuclear weapons, precision bombings, satellite surveillance. None of these are viable options if one remains too close to the zone of destruction. Their use requires that they appropriate their targets through technical means. Distance, specifically technologically generated distance, is a conspirator in the conquering of the geosphere by time. That the field of study can be saturated by light, satellite surveillance and radar detectors in the same way (and with the same brutal

(Accessed Dec. 22, 2009)
intentions) as bullets, projectiles and radioactivity is indicative of the imposing character of war technology and its offspring, information technologies.

This chapter has thus far been aimed at bringing to light Virilio’s cryptic reference of the “infosphere” and the resulting “speed pollution.” I argue that any attempt to saturate the environment with technological prosthetics for human senses constitutes the transmission of information through the environment (it also constitutes part of the environment itself). This transmission occurs between technical apparatuses as much as it is transmitted between individuals. And, it is this mode of experiencing transmission that has moved beyond the battlefield and integrated itself into countless social arenas through the use of interactive information technology. The more that technical connectivity leads to the integration of social spheres, the more likely that the infosphere of pure information circulation will emerge as a mode of coordination for the diverse actions of society.

Ultimately, Virilio ties together the development of war capabilities with the evolution of political management of space.

Improperly named ‘deterrence’ by the apologists of nuclear conflagration, pure war is therefore only the emergence of a cult, the institution of a military scientific messianism founded on the logistical capacities of vectors of extermination escaping the control of a political intelligence corrupted by materialism, a materialism which progressively turned it away from the contemplation of death (individual and collective), contemplation that all the same maintained tight relations with the origin of politics. Powerless, we witness thus today a catastrophic hybridization, a fusion/confusion comes about between mystical apocalypse and apocalyptic mystification of a cult of the arsenal…” (1998, p. 90)

From the vantage point of the “fusion” between war and technology (in the form of military scientific messianism), we can see how the vectors of ballistics foreshadow communication technologies and how military intelligence is intricately tied to the logic of the market. And, it is only from the vantage point of the war/technology fusion that we can actually observe Virilio’s
imagined analogy: interactivity is to real space as radioactivity is to the atmosphere. The speed of modern technology is synonymous with the intensive management of the globe in real time. In other words, actio in distans.

The predominant role attributed by modern philosophy to the “subject” as a centered and indivisible site of experience and perception is crucial for Virilio’s analysis of spatial-temporal experience in the modern world. For all of his insightful illuminations on the modern conditions of possibility, Virilio still seems to insist that the human is opposed to speed. He warns his readers of the “radioactive” danger of “reduced space.” He constantly condemns the “tyranny of real time.” While I share some of Virilio’s concerns (specifically that the technical mediation of some social practices may impose real time operations on social situations that require longer durations), I do not come to the same conclusions that he does. I disagree that humanity will experience “disorientation,” “claustrophobia” or sense of internalized “confinement” in the face of increasing technological speed. Speed is not foreign to the human, nor disruptive to some sort of authentic experience. Rather, through technical speed, a new form of (hypermodern) experience emerges and its dual structure must be considered. Rationalized subjective experiences (associated with real, physical spaces) and despatialized technical experiences of connectivity occur simultaneously, but not always harmoniously. The more that physical spaces embrace automated and electronic technology that near-autonomously carry out the practices of daily tasks, the more we must question humanity’s relationship to technology as perhaps too detrimental to the subjective experience of an individual. For the second half of this chapter, I bring Virilio’s work into contact with another French thinker, Bernard Stiegler, whose work on the ontological relationship between humans and technology can shed some light on infospheres, not as sites that confine the individual but as sites that enable a precarious balance in the dual
structure of hypermodern experience. I argue that Stiegler’s transductive interpretation of the human-technical ontological condition provide a philosophical foundation for a dual structure of experience that finds a new, *intensified* manifestation in the hypermodern mode of dual experience.

*Living Against or Amongst Speed: Virilio and Stiegler*

If there is one aspect of Virilio’s work that is incompatible with my reconstruction of the concept of infospheres, it is the unmediated quality of perception that his “logistics of perception” thesis assumes. The “logistics” he proposes are quite literally logistics, tactics and technically devised patterns that are built into the technical code of devices. Thus, when he claims that the sights on a gun and the viewer of a camera both train the eye in a certain style of vision, he places the human simultaneously in co-evolutionary but also in opposition to (and in a losing battle with) the dominance of technical perception. Likewise, his notion of speed is largely implicated in such an internal/external (humans perceive the outside world) distinction that values unmediated experience. Yet, Virilio’s “relational” notion of speed as a relation between phenomena is also built on the same dubious internal/external distinction. His argument essentially reduces the relational aspect of speed to the ability of humans to perceive the increasingly fast interactions of technological devices.

However, I argue the “phenomena” in question in the relational understanding of speed can also mean the co-constitution of the human by the technical and the technical by the human, an on-going process of relations that doesn’t presuppose that an unmediated human subject is the key to unraveling the social logic of speed. What is needed going forward is a philosophical foundation for rethinking the movement of inscription between humans and technics, not as
oppositional but as symbiotic and as constantly redefining the terms of the relationship. Bernard Stiegler’s work focuses on how humans and technics are co-constitutive of one another, entailed by the movement between human memory and its ongoing exteriorization into the world through technics. It is only through accessing this externalized memory (in the form of words, images, writing, sounds, tools, and generally the external storage of “culture”) that humans can learn and evaluate reality as it is presented to them. The challenge we face moving forward through the evolution of technology is recognizing what form human access to that memory (what form human relations to technical materiality or immateriality) will take. Does the technical organization of space in the form of an “infosphere” prevent human access to the technical storage of memory? Does infospheric space impose onto the human a particular mode of experiencing through technics that brings externalized memory into the present in a particular way? In a later chapter, I attempt to address this question of technical organization of space by detailing the human experience of identity formation while in the airport infosphere. But first I will discuss the theoretical interdependence of speed and experience by putting my concept of emergent infospheres into contact with Stiegler’s ontological reworking of the human-technical relationship. This will provide a context for later chapters to address empirical experience within an infosphere.

There have been plenty of attempts to read and reconcile Bernard Stiegler’s work with that of Jacques Derrida. (See Roberts (2005), Beardsworth (1996), Sinnerbrink (2009), and of course many commentaries on the book Echographies of Television (2002), a collaborative effort in interview form between Derrida and Stiegler) After all, Stiegler was a student of Derrida and they both present similar accounts of “originary technicity.” While Derrida and Stiegler disagree on the, for lack of a better word, ‘chronological’ emergence of technics as an
organization of inorganic matter, they nevertheless agree on the fundamental supposition that technics play a constitutive role in the evolution of the human through the history of the “trace.” (Roberts, 2005) They agree that radical alterity of the technical is in some way, shape or form mutually constitutive of both the human and the technical such that life can be seen as the historical movement of difference as the inscription of life (Stiegler) or the very condition that makes inscription possible (Derrida). Robert Sinnerbrink begins his 2009 article, “Culture Industry Redux: Stiegler and Derrida on Technics and Cultural Politics,” by reiterating the conclusions drawn by Richard Beardsworth’s 1996 study Derrida and the Political. Beardsworth concludes that two possible future “Derridean Deconstructions” of the political can eventually play out: Left-Derrideanism and Right-Derrideanism. Sinnerbrink claims that the “Left-Derrideanism” involves “Derrida’s analysis of originary technicity,” and has been pursued by Stiegler in his various works. This trajectory of Left-Derrideanism “reinvigorates the project of a ‘cultural politics’ that would take place in the intersection between culture, technics and politics.” (Sinnerbrink, 2009)\(^9\) I admit that I take this distinction for granted and, like Sinnerbrink, choose to place Stiegler’s work in a “Left-Derridean” context.

In narrowing the scope of my interpretation of Stiegler in this way, I am aware that it requires quite a bit of personal discretion in determining from which works I will draw my Stieglerian analysis. (He is, after all, a disciple of Derrida and has written/published work on Derridean-esque deconstruction. I cannot simply ignore this fact.) However, it has become quite clear to me that the most interesting and provocative works by Stiegler are tangential to his three-part voluminous work Technics and Time. I am more influenced by his contributions to the

\(^9\) In contrast, Sinnerbrink describes “Right-Derrideanism” as such: “The latter, Beardsworth suggests, would pursue ‘Derrida’s untying of the aporia of time from both logic and technics,’ and argues that it is the gift of time that remains to be thought; such a path would enact a messianic promise that requires Derridean mobilization of religious discourse, and a ‘passive’ orientation towards the advent of the future, of the incalculable ‘to-come’ (Derrida and the Political, p. 156) (Quoted in Sinnerbrink, 2009)
online site ARSIndustrialis.org (of which Stiegler is one of five founders and signatory of the site’s manifest). The manifest/manifeste of the site proclaims their fervent opposition to “corporate control” (a term which they acknowledge borrowing from William Burroughs.) Corporate control is loosely defined as the “submission of Mind Technologies to market criteria” which they argue “prohibits and systematically obstructs the development of new social practices.”

The site contains many of Stiegler’s papers and essays, working papers from workshops and conferences, video footage of Stiegler interviews and audio files amongst other contributions. The general tone of his work contained here could much more accurately be described as political theory, media theory or cultural criticism instead of philosophy. These essays will be my entry point in Stiegler’s “Left-Derrideanism” and will largely serve as my points of comparison to Virilio.

I argue that Stiegler’s understanding of humanity constituted through a relationship with technical surroundings contains a relational notion of technical “speed,” but one that contrasts Virilio’s. I am not convinced that the two are thinking about the term “phenomena” in the same way. In Virilio’s concepts of mobility, transmission and war, the relations between phenomena are based on the relation created by movement through space. Thus, phenomena for Virilio are defined by movement and, as such, have start and end points determined by the ‘journey” or “path” of the operation at hand. This movement can be a mobility of bodies, sight, information. His thesis on the “logistics of perception” and “vision machines” claims that real time technologies allow for the removal of human interaction from the interpretation of movement. In

20 http://arsindustrialis.org/le-manifeste makes clear the collective’s stance of opposition to the “technology sector of the mind” harnessed and dictated by the demands of the marker place. The manifest was signed by five people (four philosophers and a lawyer): George Collins, Marc Crepon, Catherine Perret, Bernard Stiegler and Caroline Stiegler.

21 It should be noted that some of Stiegler’s works that appear on the website have not been translated into English. As a philistine, I have not yet learned French and this limitation should not be confused with strategic discretion of selecting which texts to use.
this sense, human bodies are located in space, but the transmissions of today’s technologies take place in real time, not physical space. Critical distance and duration are eliminated by the mode of real time transmission. The subject becomes nothing more than an observer of a mode of technical presentation, which relinquishes the human of much of its role in the process of interpretation. Since this new form of real time presentation is accompanied by the marginalization of traditional sense perception as a knowledge forming practice, any notions of familiarity with the world based on unmediated sense perception are distorted. Through the proliferation of technical devices, this mode of presentation establishes a repeated condition of “disorientation” toward the world. For Virilio, this is a “technological continuity” of producing knowledge which emerges at the expense of a continuity of lived time, which disconnects the human from past, present and future.

In Stiegler’s work, he argues that the relationship between the human experience of time and technical systems is based on an originary human-technic relationship, or the disjunction of all temporal experience through the technical. This contrasts starkly with Virilio’s commentary that seems to link the human experience of time and space with the (in)ability to perceive the “speed” of phenomena. Stiegler’s claims that the originary duality is the possibility of collective and technological evolution, through which the external technical milieu inscribes in the human the possibility to constitute its consciousness in the present and over time. Stiegler’s philosophical analysis in *Technics and Time* (Vols. 1 and 2) sets out an agenda to think through a tension between human life and the technical, or rather to think the dynamic of the transductive relationship between humanity and technics.22 Briefly, Stiegler considers that humanity is from

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22 Stiegler defines “transductivity” as the propagation of an operation between two terms constituted as terms by the operation itself. He borrows this term from the French philosopher Gilbert Simondon. Stiegler provides this definition in his text “Nanomutations, *Hypomnemata* and Grammatisation” accessed from [http://www.arsindustrialis.org/node/2937](http://www.arsindustrialis.org/node/2937) on January 3, 2010.
its very origin technical. The creation of all artifacts and technics is actually the exteriorization of human impulses into material form. (Words capture human speech, machines replicate human gestures, information technology substitutes for the human senses). This act is not simply the exteriorization of the subject into the world. It is also, at its most basic understanding, the act of “living” (forming consciousness) by means other than organic means. Humanity is always already technical, through both the co-constitution of humanity with technics as well as humanity’s own self-constitution through exteriorization. For this reason, Stiegler confidently claims that interiority (of the subject) is nothing more than its exteriorization. By ascribing an originary technicity to human life, Stiegler wishes to move the political study of technology beyond Rousseau’s idea of “a pre-technical magical humanity: the magic unity is that which in effect, except for these key points, has not yet analytically separated forms from ground, that is, schema, which only later will become, as technical tools, movable objects.”

Therefore, Stiegler’s innovative approach to the experience of time and space is not based simply on human perception. Instead, he makes it clear that human experience (of any kind) is only possible through the movement between humans and technical context, and that human experience itself unfolds through a back and forth relationship with technical objects that house externalized human impulses and ideas accumulated over time. Like Virilio, Stiegler cites the development of the technical into its current manifestation as an industry of real time as an important factor for social theory to consider. However, this development of breaking the ‘time barrier’ (by means of real time) can be nothing short of a total redefinition of the form of the relationship between humans and technology. Therefore, I argue that Stiegler would come to a very different conclusion about speed. Speed, for Virilio, is a relation between phenomena while for Stiegler it is constitutive of the possible form(s) the resulting human-technical relation can

23 Ibid.
take. Therefore, according to Stiegler’s analysis, speed is constitutive of the evolving form(s) of human life itself. The imposition of real time privileges the circulation of information between machines and redefines the co-constitutive relationship between people and the technical.\footnote{David Wills (2006) notes a similarity between Virilio and Stiegler that contradicts my argument. In his discussion of Stiegler’s notion of the cinemato-graphic structure of consciousness, Wills argues that Stiegler ultimately roots his optimism for a future conciliatory politics in the imagined “realism” of cinema and cinematic image flow, a real-time image flow that is constantly mediated and defers the exactness of the “real” by simply being digitized. He concludes that Stiegler is equally submissive to the “powerful will to return home, the ‘earthbound’ reactivity that we have seen in Virilio” and “will be haunted by the risk of continuity as reality.” (p. 255, 256) While these comments, from a strictly phenomenological sense, are sound, my comparison between Virilio and Stiegler is designed to go beyond their mutual interest in the formation of psychological consciousness. Stiegler’s work on technology as a form of inscribed memory is also a latent form of materialism (which he brings forth in later work (2010)) that acts beyond the subject-level consciousness to form a social theory of the technical-historical conditions of possibility. It is the way Virilio arranges his relational notion of speed between internal/external that allows for this desire to return to the “real,” “continuous,” or “authentic.” Stiegler does not share this exact notion of “relational” speed, and I argue that phenomena (not just human perception) must be interpreted in light of originary technicity.}

The experience of life is always already technical from its origin, thus the experience of lived time is impossible without constituting human consciousness through technics and living through means of this co-constitution. In Heidegger’s analysis of time, technics and instrumental rationality have enabled a form of revealing such that the “authentic temporality” of being is only possible through a rupture with the everyday “enframing” power of technology. “For Stiegler, however, everyday equipment or ready-to-hand beings available for use should be understood, rather, as the enabling condition- rather than the ontic obstruction of our phenomenological experience of temporality, above all our authentic appropriation of finitude or comportment towards death.” (Sinnerbrink, 2009, unpaginated) While he simultaneously finds inspiration and contention in Heidegger’s work, Stiegler has an equally ambivalent relationship with Husserl’s phenomenology. Husserl’s work On Phenomenology and the Consciousness of Internal Time, identifies and details the primary and secondary retentions belonging to objects. While these phenomenological categories are valid in Stiegler’s view, Husserl makes a mistake by not also including the notion of tertiary retention, or the retention of culture in the form of
external objects and the material (technical) systems in which we operate. Technics are tertiary retention, acting as constitutive systems of human memory, externalized impulses or actions.25 “If time-consciousness can be shown to rely on a mediation by a technically constituted object—what Husserl calls the temporal object—then the very content of the self on Husserl’s account, the consciousness of the self flowing in time, would itself be dependent on technical mediation.” (Hansen, 2004c, p. 595) Through generations of interaction with external objects, human memory is inscribed in the technical, as we export our immediate primary retentions into words, pictures, recordings, art, digital data and other material forms. This form of exteriorized memory “does not belong to the lived experience that is, for Husserl, the sole originary and constitutive realm.” (Stiegler, 2009a, p. 6) Rather, Stiegler introduces a totally new constitutive realm of the human-technical, simultaneously indicative of the dual structure of human-technical experience. The question is what type of access people will have to those tertiary stores if the rate of execution continues to act as the most efficient measure of technology.

**Virilio on Real Time Environments**

As Virilio writes in *The Vision Machine*, “If the categories of space and time have become relative (critical), this is because the stamp of the absolute has shifted from *matter to light* and especially to light’s finite speed. It follows that that which serves to see, to understand, to measure and therefore to conceive reality, is not so much light as its velocity.” (1998, p. 146, emphasis added) In Virilio’s terms, the perception of reality is wholly dependent on the velocity at which we are able to process the external as it relates to immediate lived experience (specifically, the appearance of image or the flittering by of information). Therefore, a person’s

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25 See “Biopower, psychopower and the logic of the scapegoat” for a description of the “hook-ups” between primary, secondary and tertiary perception and the social possibility for people to turn their “attention” to objects. http://www.arsindustrialis.org/node/2924
sense of place is also determined by their ability to perceive in a given space. Yet, his tendency
to approach “reality” as an external set of circumstances goes against both a Heideggerean notion
of being as already “thrown” into the world and Stiegler’s position of originary of co-
constitution. This is why, in the age of real time technology, Virilio’s “subject” is confronted
with “disorientation” or paralysis of experience in the face of an overwhelming “external world”
of information. This proves to be a grave development in Virilio’s view. He makes clear the
necessity for a unified subject who is immediately present (grounded in the here and now) and
endowed with the physical senses to adequately process this external. The supplementation of
physical senses by machine “vision” recalibrates our ability to perceive at increased rates, but
this ability to perceive through technological prostheses is also an inability to perceive the
phenomena in question in an unmediated fashion. The extension of human perception is
simultaneously a loss of perception of another sort. As real time processes multiply and come to
dominate the spaces of everyday life, Virilio fears that humanity will experience a corresponding
loss of traditional perception, which threatens to disconnect people from the social meaning of
their local place.

One of the most crucial passages in all of The Vision Machine is Virilio’s anti-Bergsonian
revelation about what can be called the “space of time.” He writes: “Today ‘extensive’ time,
which worked at deepening the wholeness of infinitely great time, has given way to ‘intensive’
time. This deepens the infinitely small of duration, of microscopic time, the final figure of
eternity rediscovered outside the imaginary of the extensive eternity of bygone centuries.”
(1998, p. 146) He continues: “Intensive eternity, in which the instantaneity offered by the latest
technologies contains the equivalent of what the infinitely small space of matter contains.”
(1998, p. 146-47) This “core of time” as a meaningful reference of experience (as historical time
is meaningful to current experience) is only accessible through technological supplements. This
is because the “intensity” of the image (or of the sound or of information) is now captured,
broken down in digital finite code, transmitted, reprocessed, reimagined and represented to the
viewer. All this takes place in “real time,” not in the interval of space or duration, but rather in
the interval of “technological energy” (i.e., speed). Only certain interfaces are equipped to
“perceive” the interval of energy. The retina is not one of them. Television and computer
screens, however, are perfect examples of these types of intervals.

The phenomenology of “real time” is the central problem for much of Virilio’s work. In
the phenomenological tradition of Husserl, the elements of the phenomenological present “are
not differentiated by their presence as opposed to their absence from consciousness, but by their
presence as, respectively, objects of memory, attention and expectation.” (Osborne, 1995, p. 49)
This conception of “presence”, to which Virilio is quite dedicated, relies on a “present within the
present” where the unified subject brings their memory and projections to the “present” state of
consciousness in order to understand an event in time (a temporal object). However, Virilio frets
about the social readiness to address this increasing imposition of speed based technologies onto
the space of the geosphere: “the question for philosophy would stop being: ‘At what space-time
distance is observed reality.’ It would become ‘At what power, in other words at what speed, is
the perceived object.’” (1998, pp. 148-49) In the new formulation of the philosophical question,
speed and transmission totally supplant any phenomenological experience of the temporal
“event,” and past and future are marginalized by the “trans-appearance” of the present. Virilio is
never able to come to terms with this relationship between “real time” and the subject.
Stiegler on Real Time Environments

Stiegler’s conception of temporality as technically constituted immediately distinguishes itself from Virilio’s work. Virilio remains preoccupied with the necessity of the unmediated experience perceived by the unpolluted unified subject, a subject that can evaluate from beyond the fray. Stiegler, on the other hand, refuses any binary conception of humanity and technics, implying that they can never be considered in “pure” forms. Humanity is always first constituted through the technical as the very means through which we live. Conversely, the technical is never unleashed from the human as it is a repository of exteriorized human memory and continually modified through our interaction. However, I draw attention to a point of divergence between Virilio and Stiegler by characterizing the violent imposition of the infosphere onto the geosphere. The technological imposition threatens Virilio from the very first moment that traditional reference points are challenged. The interconnectivity and ambiguous circulation of information do away with reference points of “events.” From the moment when a technical apparatus represents to a viewer/listener a piece of information that bodily senses could not observe, it is clear that Virilio feels the encroaching presence of the infosphere threatening the phenomenological subject by means of masking the geosphere’s spatial and temporal reference points by means of speed. Stiegler, on the other hand, has woven a tale of “originary technicity” that not only accepts the phenomenological role technics play, but also claims that they are the condition of possibility for the formation of consciousness. In the digital era of real time environments that record and transmit data, Stiegler actually views the “contamination” of consciousness by technical memory stores as a necessary aspect of human perception and human existence in time.26

26 “Contamination” is not meant to have negative connotations here. It is meant, as Mark Hansen uses it, as necessarily present in the constitution of consciousness. “…insofar as it comprises the very condition of possibility
Rather than viewing speed as an imposition onto the geosphere, Stiegler would identify the imposition as humanity’s unreflective failure to control the form of technical systems and a failure to engage in the dynamic, tension-filled process of information as “the deposit of the transindiviuial”. (Stiegler, 2009b, p. 54) The form that technology takes, either as a single real time technology or as a collection of technologies as an infosphere, determines the mode in which “revealing” of the world occurs. When people come to know the world through these technologies, as Heidegger makes clear his distinction between “ready-to-hand” and “present-at-hand,” the world is revealed to them in a technical manner that presupposes connectivity and instantaneity. It isn’t until the contemporary era, the era of light speed technologies, that Stiegler starts to view the form of real time interaction as oppressive. “It is precisely because Stiegler insists on the correlation of the who and the what, of consciousness and the (technical) temporal object, that the ‘real time’ synthesis poses a problem: by rendering registration and broadcasting simultaneous, it threatens simply to conflate consciousness and the temporal object that otherwise, following the Husserlian analysis Stiegler appropriates, would allow consciousness to reflect on itself.” (Hansen, 2004a, unpaginated) In Stiegler’s view, speed doesn’t conflate consciousness and the objects of observation until the technical totally dominates the experience of time.

However, it is precisely because the default origin of humanity is inextricably tied to technics (and vice versa) that Stiegler can articulate a notion of time that is compatible with the notion of biological-technological evolution and an evolving notion of subjectivity. According to Stiegler, there is no “pure” space and time. He writes, “organized inorganic beings are originarily…constitutive (in the strict phenomenological sense) of temporality as well as

for this contamination, recording also marks the moment at which tertiary memory becomes the operator of this contamination and thus the condition of possibility for both secondary memory and primary retentions themselves.” (Hansen, 2004c, p. 598)
spatiality, in the quest of a speed older than time and space, which are derivative decompositions of speed.” (Stiegler, 1998, p. 17) Neither space nor time constitutes a phenomenological dimension of experience. Rather, the transductive relationship (the experience of co-constitution between humanity and the technical milieu through the bringing of the human memory into the lived present) constitutes the dimensions of experience. So, while Virilio finds the conquering of space by time (in the form of real time) very threatening to the fidelity of authentic experience, Stiegler argues that it is human experience itself, or the experience of time itself, that gives space and time their retroactive designation as phenomenological categories. In Virilio’s theory, phenomenological dimensions constitute the possibility of experience. In contrast, Stiegler puts forth a phenomenological analysis that, I argue, demonstrates space and time result from the experience of comprehensible “speed,” thus endowing the transductive humanity-technics relationship with both “originary technicity” and a sense of speed that predates space and time. Speed is inherently part of the transductive relation, and not to be thought of in the terms and measures of the physics laboratory, the measuring ruler or stopwatch. The very possibility of any experience at all only emerges from the technically constituted subject. Yet, if the possible experience of time and space results from the human interaction with its inorganic environment, what happens when technical speed brings the subjects into increasingly intense connectivity with the virtual and digital worlds of hypermodernity? What possible experience of time and space can result from despatialized, real time revealing of the world in electronic form (the infosphere)?

Unlike Virilio, Stiegler would not think that the ultimate problem of speed is the disorientation of perception. He would argue that speed rocks the very foundation of human evolution, nullifying (in certain contexts like infospheres or even sitting in front of television
screens) cultural attempts to form meaningful relationships with past and future. The encroachment of speed is actually a challenge to humanity’s ability to form a relationship between the immediate present and primary, secondary and tertiary retentions which constitute human consciousness. This means that the human-technical relationship itself unfolds through speed (the speed of real time), and this poses a radically different process of forming ideas and acquiring knowledge than could be achieved in different modes of temporality. The hypermodern subject is left with a temporal object of a new kind, such that what occurs is immediately formatted photographically and registered as \textit{a just past \textquoteleft it has been' }, that is, as a primary retention collectively and massively retained via this tertiary retention which the telediffused program indubitably and immediately already is. In these temporal objects which news programs are, it becomes impossible to distinguish between the primary memory \textquoteleft just past' and image consciousness, since what occurs immediately by the image consciousness. (Stiegler, 1998a, p. 106)

Hypermodern technics take the form of transmission, repeating images, flickering screens, and refreshed data sources. Human interaction with these technical forms generates two results. These are indicative of the dual structure of experience. On the one hand, all these technical projections (as a tertiary form of a cultural past) act to replace primary retention (immediate memory) in the constitution of consciousness. The very form of their flow, and their reception by society, is determined by instrumental speed of the image sequence (how fast the images reach the human). On the other (Heideggerean) hand, real time through virtual space creates a condition of experience where the formation of human consciousness is secondary to establishing a particular human orientation (or connectivity) toward the information flows. The unfolding of experience through hypermodern settings is simultaneously the unconscious orientation of social behavior toward real time technology. This social orientation toward
interactivity is compatible with the technocratic management of social spaces, which justifies the expansion of infospheres.

**Conclusion**

There are two related phenomenological levels of analysis in my description of infospheres as a site of human experience. First, one must consider the dual structure of experience that emerges as a result of human engagement in a world of technical objects. To experience through technical objects is simultaneously an instrumental act as well as an unconscious mode of coming to know (and becoming connected to) the world technically. Secondly, one must also understand that human experience is constituted by an ontological, originary relation to technical environments. That one is surrounded by technical objects is not evidence that tools are there to be used, but rather that one is continuously constituted by the evolving context of human and technical relations. Infospheres are a unique type of technical setting based on the technical function of translating human actions into information. In an infosphere, the “technical objects” which constitute the human subject are both interactive technologies and the produced information itself. The converted data that represents a person in an information flow is not simply data that was captured in an unconscious way. While individuals do not “use” information flows, they are very aware that data analysis is taking place on the data that represents them. They know that access is granted or denied based on providing certain types of information and they orient themselves in a compliant manner toward the form of infosphere operations. This orientation towards technical verification is reflexive in that, through the human action toward technology, the human is also constituted in a particular way: as a traveler, an employee, a threat, a consumer.
In the introduction of Virilio’s *Speed and Politics*, architecture/media theorist Benjamin Bratton writes that “Today the urban interfaces of material exchange between supply chains and demand chains include ports of entry, now refitted as computational-intensive logistics parks…Today our visionary architecture is designed not for the care and habitation of people, but as a *utopia of and for objects.*” (Bratton, 2006, p. 18-19, original emphasis) His reference to “architecture” is an analogical reference to the infosphere. “Today, *information is architecture by other means.*” (Bratton, 2006, p. 16) We are not simply confronted by the temporal object or the flow of real time in a contextual vacuum. We are always already present in the confines of information systems, government surveillance, security networks, and technological connectivity. The dual structure of hypermodern experience enables both the reception of experience on the part of subjects, but also the organization of human practices towards the technical. These experiences, and the perpetual information flows generated, are predicated on the objectification of space and time through technical perception, not human consciousness, in which case the space of the human body can become nothing more than an objectively determined infosphere itself.
Ch. 4 Airports, Information and the Conditions of Experience

In earlier chapters, I wrote generally about the conditions of hypermodernity and the basic characteristics of infospheres. I drew examples from a number of settings defined by the necessity of real time information and a specific form of technical relationship (banking, news media, etc). Now, I want to begin this chapter by justifying why the contemporary airport structure stands as the infosphere par excellence. This chapter is structured in three parts. First, I use this chapter as an opportunity to justify my political interest in airports by detailing three very important features about airports that often go overlooked: the overt political procedures to which passengers must submit, the political symbolism that airports serve and the relevance of airports as concrete, material places in the face of the growing immateriality of global capitalism. After providing a justification of the relevance of airports to political theory, I will provide background on two very influential interpretations of social space that emerged in the latter half of the 20th century. One specifically aims to describe the condition of “supermodernity” (Auge’s Non-Place) while the other attempts to describe the epoch defined by space, extension, proximity and circulation (Foucault’s Hetertopia). Finally, I contrast both interpretations with my theoretical reconstruction of infospheres, which I believe is a more fitting description of techno-social spaces in the age of “hypermodernity.”

A combination of two specific characteristics sets airports apart as thoroughly developed infospheres that encroach entirely onto the physical dimensions of their own space: the technical interconnectedness of the modern transportation industry with state bureaucratic administration and the importance of bodily surveillance for the efficiency
of these industries. They are speed saturated, overtly political environments. In the first regard, air travel is one of the most tightly knit collections of operations and procedures in a world comprised of real time technical environments. From the management of people flows to the management of timetables, cargo and airspace, the airline and air transport industries require a remarkable amount of fluid communication. (Misa, 2003) It would be accurate to say that the “freedom” of jet travel is simultaneously an obligation to subject oneself to a social world that is complex, comprised of technically connected networks of information and is ultimately obsessed with the rate of execution. The freedom of the traveler is simultaneously the domination of logistics and calculated timetables. John Urry points out that the mobile automobile experience is similarly constrictive in the “freedom” it affords. He writes, “the car’s flexibility is in fact
\emph{necessitated} by automobility. The ‘structure of auto space’ (Freund 1993; Kunstler 1994) or what Horvath terms the ‘machine space’ of ‘automobile territory’ (1974) forces people to orchestrate in complex and heterogeneous ways their mobility and socialities across very significant distances.” (Urry, 2007, p. 120) Essentially, he is articulating the dual structure of experience: immediate local “use” of automobiles is always coupled with the rules and limitations of larger physical, technical and legal networks of mobility. Urry’s description of the individual automobile takes on renewed significance when one considers the increase in scale of massive airliners moving hundreds of passengers across greater distances at greater speeds. The spontaneous “freedom” of the “Jet Age” is only capable of unfolding into reality within complex and highly regulated systems of information exchanges and rooted in the experience of technical.
Secondly, airports are one of the most significant social structures to embrace the circulation of information, not only across physical expanses, but also onto the surface (and even within) the human body itself. An airport requires information about all objects that pass through its corridors. Luggage, cargo, passengers all must pass inspection. The incorporation of the human body into the technical space of the airport is the ultimate manifestation of the infosphere. The body occupies the middle ground between self and technics, between self and space. Edward Casey notes that to be in a place is to both actively live and receptively experience the place itself. (2001, p. 687) His description of the simultaneity of active/passive bodily presence mirrors my claim that highly technical environments enable a dual-structure of experience (instrumental action and automated, but embodied, technical action.) What Casey attributes to the inherent relationship between place and body, I attribute to the originary human-technical relationship as it unfolds in socio-technical construction of technical space. Yet, it is crucial to remember the defining trait of the infosphere is its imposition onto the space of the geosphere, which includes the space of the human body. In Casey’s language, settings like airports render the human body all the more receptive, passive and “acted upon” relative to the flows of technical information. The “passive” or “receptive” experience of being connected to external sources of information becomes increasingly important, but also standardized in accordance with government rules and regulations. The “strategic” project of the infosphere is to make knowable and actable upon all that falls with its information radius, while the standard of what is permissible or impermissible is determined externally by governing bodies.
I argue that this is the reason that airport procedures so often require the presentation, examination, and submission of bodies to modes of inspection. Information architecture (in this context) is dependent on the presence of bodies, and not the intentional actions or desires of travelers, in order to continue its dromological function. The body is made readable by full-body scans and metal detectors, surveillance cameras, and the technically trained eyes of security officials. Even in simply verifying the identity of passengers, governments are relying on the spread of information flows by means of submitting biometric (bodily trace) evidence. The flow of technical information sometimes supplements, sometimes supplants, the flow of other types of information (discursive, visual, narrative). The security and efficiency of these mammoth technical spaces requires the imposition of information flows to be as thorough and penetrating as possible.

Other sites involve the saturation of physical spaces with information gathering systems and countless other places are inundated with video surveillance. Yet very few require the simultaneous action and passivity of patrons for the efficient operation of the space itself. But, that is precisely the way in which the “geo” and “info” spheres intermingle in airports. That is, since the bodies of patrons are mobile, and hence trajectories of information become mobile, the notion of space is also mobile, moving inside even the human body. The dual formation of physical space and information space enables the typical airport patron to simultaneously experience both levels of the dual structure of technical experience. However, as technical speed and information circulation become increasingly embraced as means to socially organize space, the necessity of continued information collection actually comes to overpower the general
construction of airport architecture. Physical spaces is bent and redefined to assist in the collection of information collection. For instance, the U.S. government is currently upgrading security in airports with the introduction of full-body scanners. These scanners, some of which use x-rays and others use millimeter wave advanced imaging technology, eliminate the space between body and the external by capturing remarkably detailed outlines of passengers’ full unclothed bodies.27 Yet, with modesty and privacy remaining concerns for the majority of Americans, the images captured will be represented on screens held in a different location from the actual scanners. In this way, the person looking at the detailed image will never be able to see the person they are screening, only a scanned representation. Of course, precisely in this way it becomes apparent how the necessity of information forces airport officials to reconsider the space of their screening areas. In the infosphere, information architecture imposes itself on the physical architecture of the domain. In recent years, the “upgrades” in security and surveillance infrastructures have transformed airport space, and even airport patrons’ body space, into the spaces of information circulation.

The physical limitations of transportation infrastructure (literally, how much movement is possible), the economic importance of business travel and tourism, the political implications of entering sovereign spaces and the practical requirements of efficiently managing time are all dilemmas facing passengers, employers and managers of airports. Simply put, there are a lot of important socio-political actions going on in the everyday operation of airports. The only way to handle all of these issues is to technologize airports. In 2002, Wired Magazine published an article titled “The Myth of

Airport Biometrics.” In the article, Richard Norton, Executive Director of International Biometric Industry Association, describes the challenges that face border and security agencies. In Norton’s words, “‘You're not going to be able to put more lanes on the bridge; you're not going to widen the infrastructure at the border; and you're not going to hire new people, so technology lies at the core of how you're going to speed all this up.” This quote is perhaps more telling than the speaker may have intended. In the interview context, Mr. Norton is concerned with the screening of passengers and the security of borders as a biometric expert. However, he concludes that “technology lies at the core of how you're going to speed all this up.” There is more going on in airports than the verifying of identity. “All This” includes not only security concerns, but also economic, political, and physical aspects of travel. Every aspect of airport experience is in some way “sped up,” intensified, and technologized. The geo must give way to the technical intensity of the info so that airports can operate as smoothly as possible. The identification of travelers is sped up through biometric and electronic border protections. The commercial service in shops and the purchasing of tickets are accelerated by credit and electronic transaction. People are physically accelerated via motorized walkways, airport security carts, trams and, my favorite, the monorail inside Detroit’s Metropolitan Wayne County Airport. Airports are essentially eco-systems of technological speed.

An airport is, technologically speaking, not totally distinct from other travel nodes, nor is the ambience or technological convenience all that distinct from a shopping mall or a hotel. However, post-9/11, security of public places and commercial settings has become a major point of emphasis. Nowhere were security practices more

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scrutinized and subsequently reformed than airports. Yet, the political importance of technical changes underway at airports, post-9/11, tends to be underestimated. The “rational” response to such security concerns has thus far been to turn to technology and improved information gathering. Since some of the larger airports require the processing of thousands upon thousands of passengers, the screening process must decrease the amount of time that it takes to identify “threats.” Real time coordination of government databases, identity documents that provide vast amounts of information through a single scan and machines that can instantly scan and represent bodies are “rational” responses for a society struggling with the logistical demands of security in the post-9/11 world. The state has a vested interest in the smooth and problem-free operation of airports, which explains the high level of regulation placed on privately owned or leased airport spaces by national governments. Ever since September 11th, 2001, the security of the aviation industry is a political hallmark of national security in general. National governments have seized the opportunity to highlight the efficacy of security in terms of aviation safety. The ongoing struggle to manage airports, air flight and the means of mobility retains political import in the perpetual militaristic struggle for the preservation of national agendas. The surveillance of mobility industries and the detection of threats to uninterrupted mobility are ongoing political struggles that Paul Virilio identifies as the twin correlatives total war/total peace. “There is thus a hierarchy of speed to be found in the history of societies, for to possess the earth, to hold terrain is also to possess the best means to scan it in order to protect and to defend it.” (1998a,

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30 See Chapter 2 for my discussion of the orientation of social action towards means of technological connectivity and expectations of instantaneity.
Virilio is quick to point out the ways in which the technological management of space is essential to military defense and protection in peace time struggle. The distinction between “war time” and “peace time” gradually disintegrates, as we are witnessing in the “War on Terror,” to the point where the techniques of technical observation are deployed at all times.

In the age of non-state actors and non-mobilized threats, the role of “observation” has transformed. Today, as political observation plays a correlative role to military observation, the object of optics is human geography (as opposed to the observation of territory). The goal is not to observe bodies and armies in a given space. The goal is to observe the invisible amongst the visible, the threat amongst non-threats. “Just as weapons and armor developed in unison throughout history, so visibility and invisibility now began to evolve together, eventually producing invisible weapons that make things visible – radar, sonar, and the high-definition camera of spy satellites.” (Virilio, 1998a, p. 98) Beyond that, airports employ means of observation such as biometrics and x-rays that actually penetrate the exterior of bodies. Moreover, such surveillance must work in unison with technological acceleration so as to not disturb the flows of business and leisure mobility. The price of peace time surveillance is to embrace technologies that process passengers and detect warning signs at accelerated rates. We are identified as political threats and non-threats by the very act of moving through an airport. Privacy and civil rights concerns abound, yet the political priority of the state remains the smooth operation of the travel industry.

John Torpey has addressed the relationship between modes of mobility and the ascendency of modern state control mechanisms through the appropriation of the means
of mobility. Torpey argues from a classical sociological position that the activities of states define its own “state-ness.” Following a trajectory from Marx, through Weber, Torpey makes the argument that mobility of citizenry cannot be separated from the monitoring of mobility, the identification of citizens and regulation of sovereign space. It is through this regulation of space that a state defines it “state-ness.” He traces a historical legacy of defining “states” according to their means and the level of dependency that citizens feel toward the state. (Torpey, 1998, p. 239) According to Marx, capitalist state mechanisms permitted the expropriation of the means of production by a ruling class, thus limiting self-sufficiency and the self-activity of labor among the masses. Likewise, Weber argued that modern states expropriated the means of violence, which limits the self-practice of power and certain modes of domination. Torpey claims that the next level of expropriation is appropriating the means of movement, which creates dependence on the state for authorization. By combining the activities of the state with the rise of identifying documents, Torpey makes the claim that states are able to penetrate society only by concomitantly embracing society. By providing the means of movement (the infrastructure) and allowing citizens to travel, the state brings the rather individual task of movement under their regulation.

In the case of the airport as a means of movement, technical interconnectedness frames and shapes the experience of the airport space. The way society rationalizes mobility infrastructures (they are there to be “used,” to get around) simultaneously acts as a passive social acceptance of the infosphere sub-structure of mobility. This minimizes Torpey’s concern that citizenry witness a demonstrable limitation to their freedom of movement (or that they feel a noticeable encroachment from government regulation).
The intentional acts of individual airport patrons and the intentional acts of airport employees are always already conditioned by the continuity of the technological environment through which the experience of individual action is never purely experienced outside the rationalized demands of technical speed or technical networks. By this I mean that the ever increasing drive (in science, in capitalism, in communication) toward speed and efficiency are in the process of coalescing into total environment where human cooperation with technical structures is easily rationalized.

The everyday “equipment” and “technology” we employ can be utilized in a number of ways. Heidegger calls this the “in-order-to” of equipment. However, “In the ‘in-order-to’ as a structure there lies an assignment or reference of something to something.” (Heidegger, 1980a, p. 356) The very essence of these objects, their equipmentality, tends toward connectivity and towards forming a total environment. “Out of this the ‘arrangement’ emerges, and it is in this way that any ‘individual’ item of equipment shows itself. Before it does so, a totality of equipment has already been discovered.” (Heidegger, 1980a, p. 357)31 The condition of encountering equipment and objects in a technological system is to encounter the total environment prior to the individual objects. Technological organization of spaces like airports presupposes a certain social logic (an attitude of acceptance toward technical connectivity in real time) that allows the inhabitants of that space to approach the environment in the particular mode of the “traveler.” Speed, in the sense in which I develop the term, frames lived experience by the intensity of relations it generates between people and technical

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31 The above quotes are excerpts from Heidegger’s *Being and Time* (pp. 95-107) and republished in *Phenomenology and Existentialism* (1980). All emphasis appears originally in the editor’s translation.
environments. This parallels the way Heidegger deploys the “ready-to-hand” enframing power of tools to frame our experience of them.

As I have argued in Chapter Two, the proliferation of technology (both in the form of consumer products and as infrastructural technologies to cope with the demands of post-industrial capitalism) predisposes post-industrial society toward the demands of technological speed. The more that societies surround their physical spaces with interactive, information gathering technologies, or the more these technologies invade the physical spaces of our homes and jobs, the more naturalized dromological rationality will feel. Activity like travel, labor, leisure, consumption and identity formation are all experienced through mobile technological fields. Airports are a unique setting that provides the infrastructure for all these experiential modes, while simultaneously providing a setting for the state’s expropriation of the means of mobility.

*The Travel Node as Political Symbol*

Aside from the overt political operations that actually take place inside their walls, airports serve another political role: political symbolism. How many iconic images have been captured of prominent political leaders offering grandiose gestures to hordes of media from runways? Presidents waving to the media from the tarmac or at the top of the jet way stairs just before boarding a plane are enduring images of American vitality and reassurance of future prosperity after “the journey.” It is no coincidence that so many famous political and cultural images are generated at airports. Airports are both entry points and points of departure. They are gateways for both beginning and ending mobile journeys. They are the scene of the arrival of the new as well as the departure point for as
yet to be determined future. They are simultaneously international intersections and localized concrete structures. International citizenry coexist in the buildings that are both extremely far from home and also the location from which home is almost within reach, the last stop in a foreign land.

Airport design principles often aim to convey prosperity, possibility, sound environmental and cultural traditions and the unlimited adventure that awaits the traveler. Architecture and design of public spaces frequently takes communal value and symbolic functionalism into consideration, but airports are uniquely situated as interregional and international hubs. The design of airports is a unique opportunity to put forward a public face that is reflective of the local or national culture. For instance, from June to September 2008 Zaragoza, Spain hosted one of the largest festivals/conferences in the world concerning water and sustainable development (Agua y Desarrollo Sostenible). Taking into consideration the huge passenger demand the event would require, airport authorities decided to improve the airport’s infrastructure in a symbolic way. “Zaragoza Airport is being put forward as a landmark for the expo and as such its architecture has had to reflect the subject of the festival, which is water and sustainability. The new terminal expansion was designed by Vidal y Asociados arquitectos as the ‘new gateway to Europe.’”\(^{32}\) Accordingly, the airport’s design has been described as “a flowing wave like style which also incorporates all of the expected green features such as natural cooling and maximum use of natural light as well as and most importantly recycling of wastewater and use of rainwater for irrigation.”\(^{33}\)

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\(^{32}\) http://www.airport-technology.com/projects/zaragoza-airport/

\(^{33}\) ibid.
Some will undoubtedly disagree with the notion of airports as politically and culturally charged locations. A common objection some people point out is that airports are nebulous locations where nothing actually happens and they are simply intermediate points. In a way, they are not points of arrival or points of departure, but merely structures through which people must pass to start, end or continue their journeys. It could also be argued that airports do not enable mobility, but rather they are non-places that interfere with the continuous flow of being mobile. Rather than being endowed with political, cultural or personal significance, they can be construed as obstacles occupying the time and space between significant moments and places. While they represent the start and end of journeys, they can also be intermediate points, simply nodes along the way of a trajectory. They can occupy any point along the line of trajectory for any given journey: beginning, middle, end. I disagree with assessments that diagnose airports as “non-places,” yet I agree with many elements of such critiques (and I will explain this in detail later in this chapter).

Concrete Place-Boundedness

Yet another perspective to consider is that the world’s materiality has run up against the world of digital and virtual immateriality. In such a view, the postmodern reality is that concreteness of place is usurped, in the sense explored by Baudrillard, by the cultural and visual significance placed on the high-intensity experience of simulations. The fluid

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35 In a section of Jean Baudrillard, Selected Writings (pp.166-184) titled “Simulacra and Simulations,” Baudrillard writes “Simulation is no longer that of a territory, a referential being or a substance. It is the generation by models of a real without origin or reality: a hyperreal. The territory no longer precedes the
and unstable “location” of politics could be seen as a result of globalization, technologization and a decidedly post-industrial form of politics. “The dominant interpretation posits that digitalization entails an absolute disembedding from the material world. Key concepts in the dominant account about the global economy-globalization, information economy, and telematics-all suggest that place no longer matters.” (Sassen, 2001, p. 13) From this point of view, we must assume the benign interchangeability of spaces and places, as well as the notion of immaterial place playing a major role in social relations. If we do make this assumption, the role that human geography applies to “place” as the environment of lived experience loses its contrasting reference to “space” as the physical area in which things occur. (Casey, 2001, p. 683) I suggest the dual structure of experience I proposed provides a theoretical alternative to the “loss” of space by bringing to light the experience of connectivity and simultaneity. Yet, like Sassen, I find little evidence to support the adoption of such a “disembedded” point of view. To adopt such a view is to disregard Torpey’s argument of the state’s invested interest in the material and physical means of mobility and my earlier claims that the smooth operation of the mobility/travel industry is a high priority of the government. Instead, I propose an alternative interpretation to the fluidity of power networks and suggest that the overabundance of technology, technological surveillance and technical mobility have allowed the state to develop a set of interchangeable, but very concrete and material, spaces where power can be expressed and practiced (infospheres).

If we take a moment to think about the infrastructure that states must erect in order to observe and control mobility, we notice a collection of fixed mobility nodes (air, map, nor survives it. Henceforth, it is the map that precedes the territory - precession of simulacra - it is the map that engenders the territory…”
sea and rail hubs) and connecting route ways (roads, commercial air space, train tracks). Therefore, if Torpey’s expropriation of the means of mobility thesis is correct, we must explore how state power of observation can be both fixed and mobile. To mobilize state power in this way requires a technical infrastructure capable of circulating information. In contrast to a postmodern interpretation of political power being simultaneously everywhere and nowhere (or center-less, fluid), the state has installed highly regulated, highly technologized entry points into the networks of mobile persons. The freedom associated with unfettered travel is conditional on the average person adopting a voluntarily subjected position in regard to the state’s information gathering system. For it is only through the voluntary submission to state regulated travel protocol that an individual can transcend national borders with ease. The beginning location for this voluntary submission is the fixed, stationary travel node itself.

Accounts that ignore the political nature of fixed space “privilege the fact of instantaneous global transmission over the concentrations of built infrastructure that make transmission possible; that privilege information outputs over the work of producing those outputs, from specialists to secretaries…” (Sassen, 2001, p. 13) Or, from a different view, these arguments take Virilio to the extreme and relocate all social meaning away from the phenomenological and into the digital infosphere. Virilio’s claim that real time transmission has allowed politics to be supplanted by chronopolitics assumes a certain kind of universal despatialization to politics. However, while speed and technology provide the necessary impact to shock a system based on space and to throw traditional categories of “here and now” into disorder, both individuals and the state have proved resilient to such disorientation by investing and transforming certain
spaces into the frequented spheres of political place. My examples above (nodes as political symbols) illustrate how both state and citizen have attempted to cope with the growing demands of mobility as well as the rearticulation of place in the wake of deterritorialized government, invisible capital flows, and cultural alienation.

For these reasons, it is important not to overemphasize the political significance of the concept of mobility or travel at the expense of the political significance of airport space. In other words, we cannot assume from a political standpoint that all that matters is the act of being mobile and government regulation of mobility. We must recognize the importance of the spatial and chronological aspects of an airport’s “here and now.”

Saskia Sassen makes this same argument about capital mobility:

It takes capital fixity to produce capital mobility, that is to say, state-of-the-art built environments, conventional infrastructure—from highways to airports and railways—and well-housed talent. These are all, at least partly, place-bound conditions, even though the nature of their place-boundedness is going to be different from what it was a hundred years ago, when place-boundedness might have been marked by immobility. Today it is a place-boundedness that is inflected, inscribed, by the hypermobility of some of its components/products/outcomes. Both capital fixity and mobility are located in a temporal frame where speed is ascendant and consequential. This type of capital fixity cannot be fully captured in a description of its material and locational features, as in a topographical reading. Conceptualizing digitalization and globalization along these lines creates operational and rhetorical openings for recognizing the ongoing importance of the material world even in the case of some of the most dematerialized activities. (2001, p. 16)

Hence, John Torpey’s claim that the state defines its “state-ness” through expropriating the means of movement must be understood both nationally (maybe globally) as well as locally. We cannot simply study the politics of mobility by looking at national policy or the evolution of border laws, but we must also observe the “place-boundedness that is
inflected, inscribed” by the technology, procedures and managements of airports themselves. “The key issue is not the objects that are involved in movement (such as vehicles or telephones or computers) but the structured route ways through which people, objects and information are circulated. Such route ways in a society include the networks…of hub airports…And the more a society is organized around the value of ‘circulation’, the greater the significance of network capital within the range of capitals available within a society.” (Urry, p. 52, 2007) Since I argue that in post-September 11 politics, governments place a premium on the smooth, uninterrupted and safe “circulation” of people and things through airports, it is essential to articulate the political impact of airports generally. We cannot afford to simply look at security checkpoints and passport control alone. We must look at entire material and immaterial “route ways” as well as their physical and digital management.

What instantly draws my attention regarding the location and geography of airports is their non-urbanness. Major airports require huge allocations of land and space that are not to be found in urban settings. Furthermore, airports that provide for the possibility of further area expansion prefigure the needs and constraints of the mobility industry. Airports of great size and scale, precisely the kinds of infrastructural giants that contain the networked capabilities for the state to legitimize mass mobility, are not found in concentrated urban areas (although, a new style of commercial “city airports” are growing in number). They are located on the outskirts of large metropolitan areas or between two (or more) concentrated areas. They are non-urban. Yet, simultaneously, they are at intertwined with the urban fabric. Airports are linked and connected to the urban centers through rail links, motorways, mass transit routes. Major airports are
increasingly characterized not by their geographical space, but rather by their connectedness to the nearest city. As an example EuroAirport Basel Mulhouse Freiburg (BSL) in France “is also a vital driving force of economic development for the Upper Rhine region and for the four million French, German and Swiss inhabitants who live within an hour's drive of the airport.”36 “It is one of the only airports in the world jointly operated by two countries. It is operated by both France and Switzerland but is administered under French law.” In a region of the world like the Western Europe where national borders have been deregulated and made permeable, EuroAirport is more important to the cities in the vicinity than to any one national government. (Switzerland is not part of the European Union, but has bilateral agreements with the supranational body.) So, while major airports tend to reside outside urban centers, their non-urbanness is actually a reflection of their urban connectivity. They are a proxy for hypermodern urban center.

Within modern airports, the phantasmagoria of urban life is continued. Every conceivable urban amenity is available to passengers, but only in a sort of temporality that lacks any connection to urban life itself. In the space of a few hours (between check-in and boarding, or on layovers) passengers can experience a sort of urban experience, complete with an overabundance of commodities, the intermingling of cuisines and cultures, the availability of luxury items and leisure activities, and the visual stimulation and spectacle of urban life. Spas and amusements dot concourses. The famed Rijksmuseum in central Amsterdam even has a museum annex in Amsterdam’s Schiphol Airport, housing a permanent collection of 10 works by Dutch Masters. Similarly, the provision of conference rooms, banks, bureaux de change, airport lounges and Wi-Fi

36 Source http://www.airport-technology.com/projects/basel/
connections virtually ensure that business can continue to be conducted, as if airports were merely annexed spaces of urban financial sectors. Gone is the experience of dwelling in a home city. It is replaced by three hour mini-urban vacations. Airports even appropriate urban means of moving bodies through their geography. But, instead of moving along on subway trains, taxis and buses, we are subjected to the routes of motorized walkways, airport shuttles and a variety of other means of conveyance. These urban movements through non-urban space, along with the temporary nature of the average visit, ensure that any connection to an urban experience of time is illusory. Hence, when something out of the ordinary occurs (protests, security breach) and mobility grinds to a halt, airports become charged with a sort of political time that reinvigorates the connection between mobility, time and reality. When airports function as usual and mobility is allowed to continue as a proxy for urban dwelling, Virilio’s argument that technologized time supersedes space becomes all the more pertinent. Our movement through these giant terminals, miles away from city life, is made secondary to the amount of labor and commerce that can be accomplished on the traveler’s truncated timetable.

Despite my description of the non-urban urban-ness of airports being a central feature of airport functionality, “city airports” located in close proximity to city financial centers are an increasing trend. These transit hubs are characterized by their proximity to financial centers, their convenient transport links and the predominantly business make-up of their demographic. However, while these city airports are much closer to city centers, they are being specifically designed to offer similar experiences of the non-urban urban-ness of other airports. They provide an experience of “waiting” or “killing time”
that is not common in city space, but very central to airport experience. Airport-
Technology.com cites the example of London City Airport as an example of the changing
nature of these urban hubs. Passenger flows have swelled since the airport opened in
1986, serving almost 3 million passengers in the most recent year. Runway extensions,
airport expansion and the introduction of new routes have all been proposed to handle as
many as 8 million passengers per year by 2030. In order to capitalize on the expanding
mobile habits of post-industrial citizenry, the airport, with increased pressure from
airlines, has begun to veer away from their reliance on strictly a business-class clientele.
“A new departure lounge, with shops and seating areas is penned for the previous site of
the Meridian business centre – an unused conference facility – hence making the airport
even more attractive to the ever important international travel market... Rupa Haria of
London City Airport says service like this are becoming increasingly important for city
airports, which are now catching the eye of not only the international business traveler
but the travel savvy high-end leisure market.” (Lafferty, 2008, unpaginated) But, these
very additions (lounges, shopping, etc) are specifically intended to keep travelers inside
and to occupy their time while waiting for their flights. Despite the fact that London City
Airport is specifically situated in an urban setting for quick and easy access to the city
itself, its expansion and economic success is dependent on capturing a market of travelers
intent on leaving the urban center and enjoying urban-esque amenities in an isolated
setting. That they are in an urban setting is becoming secondary to its ability to recreate
the convenience of a non-urban setting.

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37 Lafferty, Catherine. (2008) “City Airports-Part of the Urban Fabric”,
http://www.airport-technology.com/features/feature1776/
While the geography of urban airports and traditional large airports differs, the social spaces within them become interchangeable based on the consistent implementation of the same technologies, regulations and laws in airports. This interchangeability is important. John Urry claims that societies all deal with distance, movement and speed “but they do so through different sets of interdependent processes and these include various discourses of movement.” (2007, p. 47) Yet, by organizing my study within highly regulated, reproducible and interchangeable social spaces, the problem of multiple discourses is leveled out. Or, alternatively put, given the growing regulation of airport experience by bodies like the Transportation Safety Administration (TSA), U.S. Federal Aviation Administration and EUROCONTROL (the European equivalent to the FAA) and the standardization of technologies and practices, multiple discourses of movement are being replaced by a standardized “method” for allowing mobility. In November of 2001, President George W. Bush signed into law the Aviation and Transportation Security Act which federalized and standardized several key processes of the airport experience (passenger and baggage screening). Additionally, in 2004, the FAA and EUROCONTROL signed the Memorandum on Cooperation which pursues “ATM (air traffic management) concepts and technical and operational requirements, connecting the FAA and Eurocontrol.” (Aguardo, 2007, unpaginated,)\footnote{In February 2007, Victor Aguardo, Director General of EUROCONTROL, contributed an informative piece to airport-technology.com titled “League of Nations” describing upcoming challenges and responses to projected increase in U.S. and European air travel demand. He wrote that both the U.S. and Europe are in need of reformed Air Traffic Management (ATM) systems and the necessity of their integration. “The systems need not be identical, but they must be closely aligned. Several technical areas could converge, such as required navigation performance, common surveillance, air/ground datalink communications, ground-based augmentation systems, operational concepts and airborne separation assurance systems.”} The airport experience, from the point of view of both the passenger and the regulator, is reproduced in multiple settings by the necessity of aviation rules and regulations, the
installation of universal passenger screening systems and common airport amenities like stores and restaurants. We cannot ignore that the social spaces generated by airport architecture, technology, commercialization and functionality are rooted in its very spatialization as a movement-space invested with regulated technical procedures. The political significance of the movement of people, information and vehicles through airports is political precisely because of the structure of airports and the operations that occur within that space, regardless of surrounding topography.

The problem of singularity and non-uniformity hinders the successful articulation of a methodological framework, or a “mobility paradigm,” that applies to all types of movement. (Urry, 2007) However, when considering the technical procedures (and the technologization of habit), the problem of particularity is avoided by focusing on the government-enforced and market-reinforced environment colonized by urbanized, speed-based tendencies that are found in all airports. Yet, I argue that this case study is not an isolated piece of scholarship with a narrow scope of interest to only airport regulators. From this case study, I will extrapolate the social and political significance of technical environments and reoccurring infospheres. This is an emergent environment particular to the second half of the 20th century, further entrenched in post-9/11 security regulation.

**Two Interpretations of Airports**

Thus far, I have explored the political processes and possibilities inherent to airports. Additionally, I have tried to articulate the growing uniqueness of airports as being heterogeneous places that, ironically, form homogenized, regulated, interchangeable route ways. Ultimately, I aim to describe and analyze the dual
(subjective instrumental and technical-objective) phenomenological experience of inhabiting an infosphere. But, before I do, I wish to provide some context by elaborating some alternative interpretations (of airports and other similarly described places) that are often referenced in political theory, cultural studies, architectural theory and anthropology. First, I will explore Foucault’s notion of “heterotopia” as a contradictory yet relational space. Secondly, I will detail Marc Auge’s description of airports as a “non-place.” I will present both of these conceptualizations of space in contrast to the notion of infosphere I introduced in preceding chapters.

_Heterotopia:_ Foucault’s description “Of Other Spaces” wrestles with the idea of transitions. (1986) There are two simultaneous historical transitions, one spatial and one spatio-temporal, that contribute to the “fatal intersection of time with space.” In a sense, Foucault has identified a fundamental change in the conceptualization of history itself. On the one hand, Foucault was able to identify that “space itself has a history in Western experience.” (1986, p. 22) The social understanding of “space” evolved, as did the socio-linguistic expectations of behavior, ritual, and interaction. Through a combination of social organization and spatial material organization, Western civilization transformed its understanding of hierarchical space to emplacement (Medieval space), to the space of extension (post-Galileo) to relational sites of proximity found in our epoch. For the context of this chapter, tracing this transition is not essential. What is pertinent is the way Foucault insists that the sanctity of fixed spaces has gradually (though not entirely) given way to a notion of space as relational, functional and desanctified. Over the course of the
last several hundred years, the transition of spatial understanding was concomitant with a spatio-temporal transition.

According to Foucault, the 19th century was the apex of Western obsession with “history” as progress, momentum and the development of “ideas.” The 19th century was a century that privileged time over space, as if our “place” was on an historical timeline rather than in space. However, in our current epoch, Foucault notes that we have reached a technological-historical moment where ideas and institutions are unfolding primarily through spaces, not time. Spaces people inhabit lend more context to cultures than the historical time they inhabit. Interconnected and juxtaposed spaces form complex systems of spatialized power and control, to the extent that Foucault views spaces as “sites” and “connecting points” instead of individuated and sanctified areas defined in binary distinction. For example, sacred spaces (defined in contrast to profane spaces) and urban places (defined in contrast to rural) have been replaced by a complete system of interconnected sites defined by their relations to other spaces rather than their distinctiveness from other spaces or their relation to a historical ideal. Hence, cultural forces are articulated through the flux and flow of interactions within given spatial networks and these relations delineate and/or define each site. The role of time, he notes “probably appears to us only as one of the various distributive operations that are possible for the elements that are spread out in space.” (1986, p.23) In Foucault’s assessment, the experience of duration is only one factor that influences the circulation of elements (and the circulation on power) across networks of connected sites, just as technology or political ideology or economic concerns influence circulation through space.
From this standpoint, and this conceptualization of points of relations, Foucault is able to argue that certain places in the modern world function as heterotopia. (Here, modern means end of 19th century onwards based on Foucault’s descriptions of cemeteries and museums (1986, pp. 25-26) Since the contemporary world of space is defined by the relations that form between various sites (all “sites” and “places” are defined by the way they rationally and functionally relate to other places in the larger network of society), Foucault deduces a set of uniquely contemporary problems. Problems of circulation, coding, identification, and ordering constitute the relations between various spaces. However, Foucault muses that some unique spaces, heterotopia, constitute their own relations to other sites that neutralize the very relations they mirror. They mirror, muddle, contradict and disjoint relations of circulation, coding, identification and ordering. In a sense, heterotopia are places that mirror all other places as their internal incoherence confronts and neutralizes the “social order” and thus they become partially coherent sites that offer an alternative to “ordered” society. They mirror the world at large, the whole of relations that constitute the world and the expanse of socially and technologically connected places. Yet, it is precisely because they mirror all other sites that they bring the illusion of orderliness to our attention.

Foucault’s theoretical exploration of space is complicated and dense. The principles of heterotopology are often internally contradictory and not wholly compatible with one another. He gives numerous concrete examples of heterotopias, yet some occupy one camp (crisis heterotopias), others another (heterotopias of deviation), and yet some others do not seem to fit in at all unless they are totally bracketed from the political meaning of “crisis” and “deviation” (boats and mirrors that obviously precede modernity
and are metaphorically heterotopic.) The airport was not among his list; however, I do make the case that one should take notice of the heterotopic traits of airports. By emphasizing the movement involved in heterotopias (entering/exiting/transforming), and incorporating a technical extension of movement through the experience of the infosphere, I argue we can build on (but also improve upon) Foucault’s concept. This is especially true in the hypermodern, infosphere context of technological and subjective experience occurring simultaneously, but spatially diversified. Ultimately, though, I argue that the “heterotopia” tag is heuristic but not totally appropriate for the hypermodern airport. Nonetheless, the inclusion of heterotopias in this study is warranted by a number of Foucault’s insights.

Foucault does make a move toward the concrete and the material, but it seems more like a sloppy afterthought that avoids historical and dialectical considerations. He concludes his lecture “Of Other Spaces” by exclaiming that boats are the heterotopia par excellence.

Brothels and colonies are two extreme types of heterotopia, and if we think, after all, that the boat is a floating piece of space, a place without a place, that exists by itself, that is closed in on itself and at the same time is given over to the infinity of the sea and that, from port to port, from tack to tack, from brothel to brothel, it goes as far as the colonies in search of the most precious treasures they conceal in their gardens, you will understand why the boat has not only been for our civilization, from the sixteenth century until the present, the great instrument of economic development (I have not been speaking of that today), but has been simultaneously the greatest reserve of the imagination. The ship is the heterotopia par excellence. (Foucault, p. 27, 2006)

An even more thoroughly analyzed and convincing material example is the mirror. He said, “from the standpoint of the mirror I discover my absence from the place where I am.” This heterotypic mirror has relations to all physical surroundings as it reflects the
whole world as it is. The viewer is simultaneously looking into the mirror, has their image reflected back into the world at large, but is also made totally conscious of the fact their presence does not extend into the space of the mirror itself despite the appearance of being there. The mirror is very real, yet its relation to the world (reflection) is related to the world by experience, not material. The relations constituted by the mirror relate to the entirety of the physical surrounding, yet heterotopia inserts a charge into the relations of space itself. The gaze from the other, constituted in a physical space, offers a particular heterotopic experience of disjunction. The mirror serves as my heterotopia par excellence. It is a physically enduring object, whose shifting purpose and relation to the exterior world are determined by mobility through both time and space. The shifting objects that pass before the mirror, and the physical placement of the mirror itself, constitute its relation to the world. It reflects uneasiness and a simultaneously familiar face. It reflects what “is”, while the reflection is itself always unstable and potentially mobile and never the same over time. Hence, the “is” always sees itself as an unstable “is.” This is how we exist heterotopically.

Likewise, the modern major airport is heterotopic. It constitutes relations to the external world through air, road and rail routes. Yet, it is also a very real space that people pass through. Like the instability of the mirror experience, there exists a non-urban urban-ness to airport experience, but only in a temporary, unstable form of the layover. The constant flow of passengers bring into its concourses a sample representation of world citizens. People are ordered and organized by the codes on their passports and their airline tickets. While the air industry relies on excessive ordering, the experience of moving through airports is almost always stressful, chaotic and
unpredictable. Ironically, the act of being a mobile world traveler is always associated with being stuck in airports. Additionally, monitors project into peoples’ minds the global map, the progress of flights and the future destinations that await. Advertisements, travel magazines and airline logos all project external images of exotic or adventurous places to which passengers are headed. And, as I mentioned above, airports recreate an urban, commercial temporal experience. To exist in the contradictions of airport space, is to experience an urban world and an urban temporality while being extremely conscious of the artificiality of the entire situation. This is the heterotopia par excellence.

Lastly, Foucault’s fourth heterotopic principle claims that “heterotopias are most often linked to slices in time.” Specifically, heterotopias relate to other sites by either over-accumulating time or indefinitely suspending its flow. Museums and libraries are examples of the former, while festivals epitomize the latter. Airports, as collections of technologies, international food courts, waiting lounges, shopping centers, check-in counters, baggage carousels, demand that their patrons wait and wait and wait. “Please arrive three hours before your boarding time.” The airport experience is neither an over-accumulation of time, nor its suspension. The temporality of the airport is downtime, dead-time or waiting. We wait and find ways to “kill time” in airports. Yet, we are surrounded by images that depict capital cities, beach resorts, and other faraway places that represent where we will be in the future. “The trip is only the embryo of a constantly deferred becoming.” (Virilio, 1998b) Through existing in an embryonic condition of constant mobility in fixed places, we experience both the now as well as the will be, the “here” and “there.” The notion of arrival overrules the idea of departure.
Yet, one must look at airports and acknowledge that there is something else going on than a heterotopic disjunction. Despite all the above heterotopic traits they exhibit, the hypermodern context (which is a decidedly techno-spatial context) requires us to think through the airport experience. It may be tempting to think of airports in similar ways to that of Foucault’s boat. Like the boat, airports are defined by movement, arrivals, departures, aimless drifting, and circulation of people and/or places. People move from place to place like the boat picks up and drops off at various ports and experience temporary separation from the outside world. Yet, this only accounts for one type of circulation: movement through space. The informational space of the airport infosphere is a vast network of transmissions and codes that people themselves enable by their behavior in the “aimless” setting. Traveler actions in this “isolated” airport space are simultaneously acts of inclusion into larger networks of transportation. They include themselves in the economy, in bureaucratic management, in national security, and in the internet by shopping, boarding, scanning and browsing. They circulate constantly back to the external world, consciously or unwittingly, forming a very stable process of information collection. The heterotopic “neutralization” of social relations is neutralized by the circulating stability the infosphere.

Non-Places: In many ways, Marc Auge’s 1992 synopsis on the concept of anthropological non-places can be read as the antithesis of Foucault’s excurses on heterotopia. While Foucault fails to identify airports as an exemplification of heterotopia, I extend his description to include the physical enclosure of airport spaces by drawing on his materialism on mirrors and boats. For Auge, in contrast, “traveller’s space may thus
be the archetype of *non-place*.” (Auge, 2009, p. 70) He explicitly states that airports exemplify the hollowed (anthropological) condition of supermodernity. But, while Foucault insists that modernity is characterized by increased relational aspects of spatialization, Auge argues that what defines supermodernity is the opposite condition of non-relational, exotic solitude experienced in non-places. Ironically, the major asymmetry between Foucault’s and Auge’s work on space and place results from their mutual insistence that history and the experience of time are integral to understanding space in the contemporary world.

Auge begins his study not by describing or defining non-places, but rather by defining “supermodernity” by means of three categories of “excess”: excess of time, excess of space and a figure of excess in the ego (the reemergence of the ego). (2009) While all three conditions of excess constitute supermodernity, and hence create the conditions of possibility in which non-places have evolved, the excess of time remains most pressing for the present discussion of airports. According to Auge, “the difficulty of thinking about time stems from the overabundance of events in the contemporary world, not from the collapse of the idea of progress which- at least in the caricatured forms that make its dismissal so very easy- has been in a bad way for a long time.” (2009, p. 25) This is was he calls “imminent history” and asks us to imagine “history snapping at our heels.” The quick succession of events that we are asked to consume, both through the proliferation of media images as well as our accelerated movement through space, bring history into the present in an overwhelming fashion. We struggle to comprehend the excess of time as simultaneity and instantaneity rival the relatively grounded experience of living in historically-laden anthropological places. “For it is our need to understand
the whole of the present that makes it difficult for us to give meaning to the recent past.”
(Auge, 2009, p. 25) Unlike Foucault, who viewed spatial organization as accumulating and ensnaring the inertia of history, Auge perceives the excess of historical experience as rendering physical spaces hollow and void of its own spatial history.

Of course, Auge’s description of non-place only makes sense when contrasted to traditional, anthropological place. “Place becomes necessarily historical from the moment when- combining identity with relations- it is defined by a minimal stability.” (Auge, 2009, p. 44) Anthropological places demonstrate relations to the past, not relations to other places. “The recently dead populate (place) with signs…(that) require special knowledge.” (2009, pp. 44-45) Non-places, on the other hand, require a different kind of special knowledge, one compatible with the time of the present moment. Hence, for a person to live and move in non-places efficiently, it requires the taking up of a mental and social disposition that neither defies nor embraces the history of place. Non-places ask us to abandon relations to the past, both in terms of positive relations as well as the negation of those relations. Remembering that the traveler’s space is the archetype of the non-place:

..Movement adds the particular experience of a form of solitude and, in a literal sense, of ‘taking up a position’: the experience of someone who, confronted with a landscape he ought to contemplate, cannot avoid contemplating, ‘strikes the pose’ and derives from his awareness of this attitude a rare and sometimes melancholy pleasure. Thus it is not surprising that it is among solitary ‘travellers’ of the last century…that we are most likely to find prophetic evocations of spaces in which neither identity, nor relations, nor history really make any sense; spaces in which solitude is experienced as an overburdening or emptying of individuality in which only the movement of the fleeting images enables the observer to hypothesize the existence of a past and glimpse the possibility of a future. (Ague, p. 70, 2009)
Just as I articulated in Chapter Two that the conditions that characterize the hypermodern world ask those who wish to function and move with ease to adopt a dromological rational disposition, Auge implies that the spatial characteristics of non-places ask us to adopt a particular (traveler’s) disposition in which relations to the localized past lose their historical meaning. “As such, it is a form of space characterised by abstraction, in which its passing inhabitants locate themselves first and foremost through relations with words. This ‘invasion of space by text’, as Augé puts it, is understood to produce a ‘solitary contractuality’ as the distinctive mode of social existence of its (temporary) inhabitants.” (Osborne, 2001, p. 187) “Solitary contractuality” between the temporary inhabitant and the technological rules of (non)place require a “special knowledge” and certain disposition inclined towards accelerated and ephemeral experience. And, due to the temporary and ephemeral nature of experience in these non-places, the submission to technical rational demands seems justifiable. We inhabit these non-places through our mobility through them, hence a transitory and mobile knowledge of present procedures is necessary more so than knowledge of relational history to the place. Moreover, each non-place has a unique set of rules and procedures. For Auge, it is not that modernity is characterized by spatial connectivity and relations, but rather that each non-place is a transitory moment and experience in which we temporarily suspend our relations to all other places for the sake of following procedures. At this point, it should be clear that while Foucault’s relational notion of heterotopia-paradigmatic sites incorporated a number (though not all) of the spatial principles I outline of infospheres, it is Auge’s description of the non-place inhabitant that is more compatible with dromological
rationality as adopted by the patron. Both theoreticians can be applied to the hypermodern, yet neither is fully compatible with infospheres.

What type of social spaces can be characterized as non-places? Shopping malls, hotels, freeways, supermarkets, ATM’s, security checkpoints and, of course, airports. Locations that insist on cooperation with technical codes and procedures also insist that inhabitants fall in line with the demands of itineracy and timetables. Aisles, walkways and lanes presuppose the movement and destination of inhabitants all the while asking for proof of identity which can only be given by people who have acquiesced to the condition of “one amongst many.” (Auge, 2009, p. 84) People, through appropriate behavior, must first identify themselves as customers, passengers, patrons or motorists before they can be allowed to verify who they are. But, they must adopt and adapt: adopt the behavior of an ordinary inhabitant and adapt to a particular mindset of attention to the proceduralism of such environments. Through these concessions of personal history and determination are they able to then assert who they are, where they are going, what they are buying, how much money their account holds, and essentially, why they are in a non-place at all. Of course, the spatial organization of such non-places begs comparisons to Foucault’s notions of surveillance and “gaze.” According to such a reading, it is precisely because we are moving through the systematic networks of related sites that our personal information and location can be monitored and tied to the geographic concerns of the spatial organization of people.

There are some people who argue that the fatal flaw of Auge’s assessment of the non-place is that he isn’t nearly Foucauldian enough. I disagree with such an assessment of Auge. For instance, Peter Osborne makes one such argument. Yet, in the end, it is
apparent that he struggles with the “abstraction” of the non-place and declares that
Auge’s non-place is the residue of a theoretical dialectic that merely negates a
“backward-looking romanticisation of the anthropological conception of place” yet fails
to fully articulate a “forward-looking positive ‘ethnology of solitude.’” (2001, p.188)
What Osborne tries to incorporate is the technological connectivity of spaces as an
unavoidable condition of supermodernity and that such interconnectivity inherently
expresses a spatial logic of its own that surpasses the containment of physical enclosures.
In other words, he views the spatial relations of supermodernity as relational, but without
relation to the place-boundedness of physical space. Instead, he identifies this as the
“space of flows.”\textsuperscript{39} In a very Foucauldian way, Osborne continues that the notion of non-
place “can only be coherently construed, conceptually (and not just as an accident of
‘existence’), as itself \textit{intrinsically a special type of place}, constituted as a place by its
dialectical negation of place in the anthropological sense of a space that generates
identity-forming meanings out of the permanence and generational continuity of the
physical contiguity of its boundaries. That is, I want to argue, \textit{all non-places are places qua non-places.”} (2001) Rather than embracing the discomfort of the non-place and the
ineffable “logic” of solitary contractuality, Osborne insists that Auge’s dialectical
reasoning fails to sufficiently negate the notion of place itself and that, in Auge’s work,
that a sense of anthropologic space always remains internal in the notion of non-place.

Though Osborne tries to incorporate a relational logic of the space of flows as one
that ontologically redefines the notion of place in supermodernity, I feel he attempts this
move in a way that can rescue a new spatial logic from non-place only by diminishing the

\textsuperscript{39} Osborne has appropriated the idea of “space of flows” from Castell’s \textit{The Rise of Network Society},
Manuel Castells, \textit{The Information Age: Economy, Society and Culture. Volume 1. The Rise of the Network
role of experience. Both Auge and Foucault insist that people succumb to a particular sort of experience that contradicts the everyday of life. In regard to Foucault, I argue that airports offer a unique experience of contradiction, where we fully relate to the world around us, but it only through the unsettling recognition that the politics of ordinary life are illusory. Auge, on the other hand, provides us with a sort of experience that is simultaneously a non-experience. In the prologue to Non-Places, Auge describes the rather ordinary exploit of a traveler, Pierre Dupont. The entire prologue is dedicated to his series of encounters with non-places on his way to catch a flight. Throughout, not a word is spoken, nor is any experience truly memorable or unique. He goes to the ATM, motorway, toll booth, parking lot, check-in counter, airport terminal. What is unique is not that non-places are technologically leading Dupont around, nor that he is moving within a highly complex network of successive checkpoints. The uniqueness of Auge’s prologue is precisely that it functions so poorly as a prologue. The experience of Pierre Dupont can hardly be described from a narrative standpoint. This is the essence of non-place. We experience no relations to the past, nor does experience of operating within the non-place create the foundation for a new memory. We do not constitute ourselves via narrative or performative experience in non-places. Osborne argues that what matters is the “place of flows” between non-place and place but what he fails to account for is a lack of any sort of stable experience through “flows” that can take on the characteristics of (non)space. If the characteristic of our time is the interconnectedness of spaces and sites in networks of flows, we must also make note that a critical negation of the concept of “place” can only be done through a critical engagement with the flows themselves. Since Auge insists that neither non-place nor place are ever totally complete, it is fair to
assume that non-place and any possible relation that could form to it could be nothing
more than partial and incapable of stability. At best, it is like reading an incomplete,
fragmented narrative.

Auge is not unaware of the difficulty in contrasting non-place to a romanticized
notion of historical place. He fully acknowledges that the images and perceptions of non-
places “tend to make a system; they outline a world of consumption that every individual
can make his own because it buttonholes him incessantly.” (2009, p. 84) He continues:
“In the concrete reality of today’s world, places and spaces, places and non-places
intertwine and tangle together. The possibility of non-place is never absent from any
place.” (2009, p. 86) Clearly, Auge is not blind to the inadequacy of a purely negative
interpretation of non-place. He aptly addresses the notion of spatial interconnectivity
while retaining a unique temporality for the non-place, a temporality unique to solitary
contractuality and not reducible or reproducible in a system totally defined by the spatial
logic of flows.

Conclusion

This chapter has argued that to study a technological, interconnected, highly mobile and
speed-obsessed society, we must have some concrete examples. Airports are a prime
example for such a case study. Throughout, it has been articulated from a number of
viewpoints that airport environments set the stage for the mingling of various social
phenomena. Physical embodied experience only occurs through the technological
interconnectivity of systems and computer networks. We are simultaneously connected
and detached from everything. Security and safety are provided at a high cost of
convenience and privacy. Neither smooth operation nor extraordinary protests are void of political import when they occur at the airport. We could not be more entrenched in urban clutter than when we inhabit buildings miles away from city centers. The shrinking of the world is achieved by the acceleration of mobility. However, to achieve this mobility we must patiently wait in numerous lines and waiting-areas. We tolerate, sometimes even enjoy, the airport experience because of the particular mindset we must adopt to experience them. These “places” dizzyingly combine elements of mobility and immobility, privacy and anonymity, commerce, consumption and politics, yet it all makes sense to us. Sometimes, the excess and overabundance of these “places” doesn’t even register in our minds, and peacefully resides in oblivion. Both Foucault (by my extension of his work to airports) and Auge focus on the type of experience that can be had in the unique settings of modern/supermodern places. Both seek to address the internal tension of experience that results from temporal disconnects we find in a networked world that consists of “heterotopia” and/or “non-places.” My conception of infospheres incorporates elements of both spatial concepts (though, admittedly the infosphere is closer in theoretical complexion to a non-place). As I have alluded to before, and I will address again in the next chapter, by grounding my analysis of hypermodernity in Stiegler’s human-technical ontological origin, I will explore the “infosphere” experience that is at ease with two concomitant forms of temporal experience in infospheric space: instrumental and technical experience.
Interview: Invasion of the Body Scanners

Interviewer (Tony Ferguson): “Do you think that it’s people that are the problem or should we just be finding better ways to spot weapons and other dangerous objects?”

Dr. Mark Salter: “I started out thinking that the focus on objects was a mistake. But, the more I looked into it and the more I talked to the aviation security experts, the more I am convinced that we simply don’t have the intelligence or the ability to identify who those problematic people might be. And, if that’s the case, then I think focusing on dangerous objects is one way to treat all individuals the same way, to subject them to the same security screening regardless of their country of national origin or their profile or even their behavior.”

The above interview was conducted with Mark Salter, an expert in the politics of aviation security, regarding the strong social and political demands for more thorough body surveillance at airports. Throughout this roughly 11 minute interview recorded in January 2010, Salter makes a number of engaging and provocative statements, most notably the above recommendation of full-body scanning as an appropriate (and indiscriminate) response to recent failures in airport security. But, it is worth noting that public and political debate about the use of full-body scanners in airport terminals did not reach its fever pitch until after the failed attempt to destroy a Detroit-bound airliner on December 25, 2009. The foiled bomber hid a small quantity of explosives on his body in a way nearly undetectable to current airport screening techniques, but would have likely been caught by a new wave of full-body scanners. In light of the creativity of terrorist agents, the political response has been for further investment in full-body scanners and

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40 This interview was conducted on January 8, 2010 by The Mark video lead Tony Ferguson with Dr. Mark Salter, an Associate Professor in the School of Political Studies, University of Ottawa. Dr. Salter is an expert in aviation security. Audio of the interview is available at: http://www.themarknews.com/articles/813-invasion-of-the-body-scanners, accessed January 11, 2010. I have edited out some of Salter’s response and just included his final answer to the question.
more wide-spread, if not universally mandatory, use of these machines in U.S. and foreign airports. This proposed security “improvement” is a post-hoc response to a previously identified threat. Security experts have accused the United States of being perpetually one-step behind aviation threats. “Security technologist Bruce Schneier believes that the body scanning machines are a waste of money. Investigation and intelligence gathering is where the money would make a difference, he said. ‘Stop trying to guess. You take away guns and bombs, the terrorists use box cutters. You take away box cutters, they put explosives in their shoes. You screen shoes, they use liquids. You take away liquids, they strap explosives to their body. You use full-body scanners, they’re going to do something else,’ said Schneier…” (Hunter, 2009) Yet, despite the objections of Schneier and other like-minded authorities, it appears as if the United States is on course to address future airport threats with a response appropriate for December 2009. According to the TSA website, 385 advanced imaging devices are currently in place in 68 airports. Appropriating funding for an additional 300 machines is the goal for 2011.

This chapter is not about airport security per se, but rather about the airport experience of everyday patrons and the human-technical interaction mandated by the functionality of modern airports as infospheres. I begin from the assumption that the U.S. response to the 2009 Christmas plot is indicative of the widespread adherence to technological solutions for political, legal, logistical and security problems. The technological infrastructure of airports (screening, surveillance, computerized databases,

Accessed on January 19, 2010

42 http://www.tsa.gov/approach/tech/ait/faqs.shtm
kiosks) has changed drastically in recent years both because of technological advancement and the perceived need to constantly upgrade airport functionality. Due to the complexity and precision required in safely directing the flows of countless people and pieces of cargo, there is no alternative to management by technical means. It is almost as if non-technological responses to such problems are incomprehensible. As my arguments so far have suggested, the functionality of technology is often overemphasized at the expense of adequate analysis of the experiences generated by these particular manifestations of human-technical interactions. This tendency to identify possible uses for technology focuses on the instrumental capacity of the device, but fails to grasp the “technological” social attitudes and mindsets that are produced through these interactions. Focusing on the instrumental aspect of technical processes also ignores the way that spaces organized in accordance with these technological attitudes only allows human-technical interaction to occur in certain ways (the way permitted by rules and technical procedures).

In addition to the “rules” and “procedures” that govern the politics of infospheres, the actual layout and organization of physical space establish an environment (in which human and inorganic objects co-exist) that reinforces a certain type of comportment towards the space itself. Aisles, check points, interrogation rooms, off-limit areas, waiting rooms, lines, and zones of consumption can all be found in airports. In each temporary moment of passage, a person is expected to behave in a different social role: passenger, consumer, trespasser. The architecture, visual design, and technological interfaces of airports are constitutive of the political experiences that travelers have in these places while at the same time the mobility practiced by travelers constitutes the
meaning of airports as symbols of democratic possibility and freedom of travel. Some surveillance and security scholars argue that these two modes of political experience come into extreme tension with each other. They claim technological constraint and personal mobility create a struggle or tension between subject and the technological experience of the individual. (See Ceyhan, 2008. Caplan, 2001. Lyon, 2001) These assessments of the airport experience, however, make a number of assumptions about both technology and subjectivity that need to be reexamined.

This chapter is designed to explore the way technological functionality and regulatory objectives (security, efficiency) obscure the understanding of infospheres as total environments constitutive of temporal and spatial political experience itself. The externally defined (government defined) rules and procedures of airports are instrumentally carried out by means of submitting passengers and cargo to a variety of technical mediations. The “end” pursued is the processing of passengers and uninterrupted flight patterns. The “means” employed are technical screening devices that capture and circulate information about nearby objects or bodies. But, there is also an obscured phenomenon that emerges as a result of organizing space by technical means of instantaneous information flows. I argue that certain processes that are normally rooted in non-technical experiences of duration and space are forced to be “played out” in a technologically “intensified” manner. In spaces defined by the means of technical information flows, political subjectivity is not formed exclusively through discrete “use” of technological devices. Rather, if human consciousness emerges out of practical relationships with the world of organized objects (as I argue in earlier chapters), subjectivity in the infosphere would be constituted through engagement with the total
environment of circulation. The subject is both actively and passively engaged in its own formation as a patron and as an information source. Therefore, processes and experiences that contribute to the formation of the subject are both intentional and unintentional, yet not accidental. While this duality of subject formation isn’t unique to hypermodern spaces, the inherent speed (intensity of connection to technical networks) enframes the formation of consciousness, attitudes, and expectations toward a technical orientation.

I remind the reader that I begin from the assumption that airports, thanks to their technological connectivity across space as well as their material histories, are inherently political places. In my previous discussion contrasting infospheres to non-places and heterotopia (see chapter 4) I outline the experience of political time and political space that contemporary airport technology makes possible. From this foundation, I make three distinct arguments in this chapter. First, I argue connectivity (or the experience of speed as intensity of connection) of airport spaces enframes the experience of mobility such that mobility ceases to be an ongoing “becoming,” as Virilio noted, but rather a knowable and predictable practice, specifically from a technical point of view.

Secondly, I move beyond general theoretical analysis of airports and focus on specific technological interfaces to which people submit but also simultaneously produce their place in the “airport” system of flows. Since September 11th, the passage through certain security interfaces and the carriage of technologically enhanced travel documents has become increasing institutionalized in countries around the world. The leveling and standardization of these types of experiences makes certain moments of the airport journey replicable and interchangeable from city to city, nation to nation. Yet, it is
precisely the widespread replicable aspect of this experience that some airports scholars analyze as a breakdown in subjective experience. (See Caplan (2001) and Lyon (2001))

Lastly, I engage, and refute, many of these arguments regarding the breakdown of political subjectivity through objectifying “identity practices” such as passport verification and security screening. If one considers the “end” of airport security measures is simply to identify and to allow or disallow access, then one can easily rationalize an instrumental interpretation of technological as “tools.” Critics of this position argue that using such screening devices has a peripheral effect of bypassing the (discursive) self-assertion of identity. However, I argue that this line of analysis misses the point of human-technical interaction by uncritically accepting an oversimplified notion of instrumental/goal rationality. I argue the “end” is continuous airport circulation, to keep the bodies and information flowing in and out of terminals, planes, shops, restaurants, lounges, and parking lots. The “end” is the full functionality of the modern airport, the production of information and its coordination as a total environment and self-contained political economy. It is only through the predictable and continuous flow of human bodies through its concourses that the airport can stabilize itself as an infosphere. The real threat of objectifying the passenger is not the formation of a subjugated subjectivity; rather, this sort of objectification leads to the subject’s inability to bear witness to their role in a total environment or the way they are always already constituted by the technics of any environment.
Airports as Infospheres

Modern airports, and by extension the infosphere, are not simply an empty space void of political meaning in which external authorities dictate what political experience can occur. The physical spaces of airports are intersections of multiple flows: people, information, vehicles, cargo, laws. The functionality of the airport (not specific machines, but the whole airport) politicizes the space itself into a sphere of management, of which control over flows is the primary resource. (Hoete, 2004, p. 16) The airport space is political in its own design as it filters, directs, makes visible, accelerates, decelerates and categorizes its patrons. According to one airport scholar, “airports actually work to make these differences by sorting passengers into different modalities.” He continues “that these differences are not created by accident, but rather they must be attributed to the imperatives of the airport political economy and security nexus.” (Adey, 2008, p. 146) So many functions of airport and security management are delegated to management by technique that feelings of privacy, violation, security, fear, freedom and restriction are generated and tempered by technological experience more so than the experience of mobility. Passage through airports, including immobility and waiting, generates the political economy of the airport space. In other words, how we pass through airports generates a political activity far removed from our actual movement through these buildings. The organization of these movements and flows is the dromological organization of information.

As a necessary byproduct of this kind of networked space, certain sites, like airports, become inextricably tied to infosphere relations of time and space. For it is only through instantaneous communication, verification and processing that the phenomena of
mass mobility can be linked to safe air travel. And, it is only through the efficient management of airports and air travel industries, especially post-9/11, that “travel” as a social activity maintains even the faintest resemblance to the unlimited freedom that it once represented. For this reason, we must recognize that speed is not simply a measure of how fast a plane travels or how rapidly people move from point A to point B. Technical speed is not only a scientific measuring stick for how efficient an operation is (although this is one definition). Speed, as a relationship between phenomena, is also an experience of intensity and a coming to know the interconnectedness of technical world by means of interacting with the technical world itself. By simply being present in a space that translates bodily presence into information, a certain mode of “technological” (in Heidegger’s sense) thinking emerges. In the context of airports, this experience of intensity is unconsciously felt as “being connected” to the larger political economy, legal frameworks, and mobility networks of airports by merely “being in” the airport. Technical connectivity is a necessary feature of both mass mobility and of airport management as numerous phenomena must be technologically linked across huge distances and in real time, yet the role information circulation plays in the formation of a particular mode of being is often overlooked. For instance, the public has been told to reconsider the liberal concern for privacy precisely because the most “efficient” means of identifying and verifying passengers is through technologies that puncture the private sphere of our bodies (full-body scanners generate images that leave little to the imagination.)

One can also see the same pattern of technical bureaucracy preceding social interpretation in the practice of “verification.” According to a study by Jane Caplan, the
standardization of identification would not be feasible if identity was established through “recognition,” as it had been until nineteenth century Europe. Instead, recognition as the standard of identification (subjective recognition of self in the context of others) needed to shift to something replicable and something capable of being standardized. So, through the technical production and technical bureaucratic practice of passports, subjective recognition was replaced by objective “verification.” (Caplan, 2001, pp. 50-52) Of course, the rise of standardized and widely distributed technical documents required people to reevaluate their understanding of identity and subjectivity in a techno-bureaucratic context. Hypermodernity, the world of connected databases and digital information, the digital trace of biometric verification is privileged as establishing identity. Rather than a subjective personal history to relate the subject to the past and the present, the digital trace links the person to a past places and past moments easily inspected by the airport security agent looking at a database file. (Caplan, 2001, p. 53)

The passport asks society to reinterpret the idea of identity, identification practices and subjective recognition of self.

Generally speaking, infospheres introduce new conditions for the formation of social relations. Circulation (information, people, images) is the pre-contextualized environment in which people come to recognize avenues of possible activity, but it is also the condition of regulation, management and functionality. As I have stated repeatedly, the essence of speed should no longer be based on the idea of acceleration through space, but rather the increasingly instantaneous coordination and synchronization of phenomena. When Peter Adey cites Deleuze and Guattari by saying the aim of airports “is not to necessarily imprison passenger movement but to create ‘fixed paths in well defined
directions, which restrict speed, regulate circulation.” we can assume the “slowness” of restricted speed is not a contradiction of my central thesis. (p. 150, 2008) In fact, the restriction of physical movement of bodies is fully compatible with a dromological imposition on the masses. The real time coordination of arrivals, departures, security checks, surveillance, commercial transactions and information distribution are all indications of infosphere imposition. Thus, the restricted speed of passenger movement regulates “passenger mobility so as to smooth the procedures of operational and security processing, or to create exposure to airport consumption.” (Adey, p. 150, 2008) With the economic necessity to provide passage for more and more flights, airports transform their own spaces into settings designed to coordinate and regulate not only the experience of mobility but also the act of waiting.

At this point in the study, it is necessary to move beyond the general conceptualization of infosphere and address some of the actual hardware in place at airports with which passengers have interactions. By focusing on biometric passports and identification checkpoints, the above information about infospheres (Chapter 4 and the first section of Chapter 5) will take on added significance in the articulation of a hypermodern understanding of social and political relations from the point of view of speed.

**Biometrics and Bodies**

Biometric passports are the new wave of identity documents that attempt to link the body of a particular traveler with their respective travel documents by employing technology that evaluates the physical features of the body. The goal of biometric
security includes both identifying travelers (matching the individual to their documents) and verifying travelers (verifying the authenticity of the documents.) “Technically speaking, once a person is registered in the system with one or more physical or behavioral characteristics, this information is processed by a numerical algorithm. The algorithm transforms it into a digital template that is stored in a centralized database which is accessed when ‘live’ images of the finger, hand, face, eye or voice is presented to the system. After a similar algorithmic transformation of this second biometric image, a comparison can be executed.” (Ceyhan, p. 113, 2008) Advocates and detractors of biometric passports envision that the implementation of such documents will allow for the collection (by governments) and international distribution (by both governments and industries) of bio-based identity records. In the cases where a country’s border control does not have access to the international identity database or where a country refuses to participate in such an endeavor, verifying the authenticity of a traveler’s identity claims will not be easy. But, their ability to identify travelers will still be enhanced.

The two primary sources I have used to research the technics, objectives, interoperability, consequences and criticisms of identity cards are Privacy International and the International Civil Aviation Organization. (privacyinternational.org and icao.int) The ICAO is a U.N. level international agency seeking to establish an international interoperable system of Machine Readable Passports (MRP). This means that there must be compatible technology in place so that issuing States can inscribe data into documents that receiving States can read and verify as coming from the correct source (the issuing State). Data must be readable, transferrable and able to be processed by all States involved. The Technical Advisory Group on such passports is “responsible for the
development of specifications for travel documents with the goal of interoperability” and “to advise ICAO on issues related to the issuance and the use of machine-readable travel documents.” In a statement by the ICAO Secretariat, the group asserts that “the only method of relating a person irrevocably to his travel document is to have a physiological characteristic of that person associated with the travel document in a tamper-proof manner. This physiological characteristic is a biometric.” The ICAO conducted a five-year investigation into the logistics and legality of biometric usage and in 2002 concluded that the best biometric technology for passports for maximum global interoperability would be facial recognition.43 (Other options included fingerprints, iris scans, voice and signature etc.)

**Biometrics and Speed**

Even though passports include no moving parts, nor do they move any faster than the passengers that carry them, these modern identity documents perfectly exemplify the point I have been making via Paul Virilio’s vague definition of speed: speed is a relationship between phenomena through which everyday experiences are coordinated. Asserting identity, physical movement of bodies, interaction with machines and digitized data, and instantaneous recognition of threat and security are all related to one another in the blink of an eye. However, in contrast to earlier security measures, today’s biometric grid involves computerized databases of intimate bodily features, such that “live” bodies can be instantly made discrete and removed from the context of personal history and instead analyzed in a technical modality. The technical apparatus of the passport

document forms a single object of inspection that brings together information from objectifying bureaucratic procedures and subjective bodily influence. The way that they coexist in one document does not simply objectify the body. Instead, technical reference points and biological reference points mutually form a sort of identity that is wholly compatible with (or knowable within) the information circulation of airport space. These passports do not express speed as a function of how fast something moves through space, but rather these passports show that speed is the context in which we present our biometric self for instantaneous inspection to authorities and through which we eliminate delays caused by discourse, questioning and scrutiny. When we approach the moment of screening, the “way we present ourselves” for inspection is already predicated on the relationships made possible by technical connectivity. Authorities readily assess identity from the “data double” presented on their computer screens. (Haggerty, Gazso, p. 172, 2005) In the procedure of identifying passengers, the historical dimension (personal history) of time is replaced by memory space in a computer system.

Viewing biometrics through the analysis of speed may seem odd. But, embedded data, highly advanced computer programs and state of the art materials all seem fit to be analyzed by students of the philosophy of technology. They are inert objects that move no faster than their human holders. They have no moving parts. True, they transmit data in very little time, but so do countless other technologies. But, as I argued at the beginning of this case study, speed is not a function of acceleration or movement through space. Rather, the experience of possessing and presenting these biometric identifiers is accompanied by a feeling of being connected, via the transmission of “your” biometric data, to the networked world. Of course, this mode of existing also produces a
simultaneous technical vantage point from which it is possible to technically analyze information, to act on it and to affect the experience of the data source. In the context of airports and security check points, the instantaneous verification of threat/non-threat means that security officials only understand our personal security from the point of view of the screening process. Additionally, these identification methods are also aimed at maximizing the convenience of passage into zones of consumption, such as the airport eateries, gift shops and other attractions. While the airport regulators have a variety of goals in mind, from the point of view of the traveler, the experience of technical interaction in the airport infosphere is a simultaneous revealing of numerous social logics to which they must orient themselves as passive, compliant “passengers.”

Despite objections about the efficacy and reliability of biometric screening, privacy concerns and the practical impediment of collecting all the biometric data in the first place, plans to implement these methods are on the rise. A simple look at the ICAO’s webpage and mission statement reveals that biometric advocates are attempting to link speed, efficiency and certainty. Regarding machine readable travel documents, they cite (among other benefits):

Benefits to Governments

- Rapid and Precise Identification
- Promote Efficiency and Save Resources
- Improvements of Systems
- Electronic Monitoring and Control of Issuance Process
- Electronic Tracking
Benefits to Travelers

- Quick Processing

Benefits to Airport and Other Port Authorities

- Rapid and Efficient Processing of Passengers

Benefits to Airlines

- Verification of Document Authenticity
- Rapid and Efficient Processing
- Security Benefits

Biometric technology itself is not bringing about the acceleration of people and bodies, nor does it transmit information at any faster rate than other modern information technologies. But, as the ICAO repeatedly points out, high-tech passports are a functioning part of a society, an industry and a government domain all obsessed by speed as it instrumentally manifests itself as a correlate of efficiency. However, we must question if the justification of “fast processing” is simultaneously masking or obscuring some of the consequences of information sharing, real time processing, and security dependence on technical “tools” that may conflict with established political beliefs.
Context of post-9/11 Airport Infosphere

In a 2005 article from the *Canadian Journal of Sociology/Cahiers canadiens de sociologie*, Kevin Haggerty and Amber Gazso explore the increase of surveillance measures as the “logical” response to increased terror threats. Among the various types of surveillance (practices that gather information), they include passports, biometrics, body scanners, facial scanning and systems integration. I cite this article to help contextualize the post-9/11 airport space. The article concludes with four possible (or concomitant) consequences of the expansion of surveillance. “The first relates to how surveillance can foster a greater awareness and fear of the unknown or unseen. The second concerns how surveillance can paradoxically be ratcheted up as a result of its past failures. The third involves the way in which domestic security has been commoditized. The final factor relates to the public’s apparent lack of concern about the more extreme risks posed by intensified surveillance systems.” (Haggerty, Gazso, 2005, p. 183) The second and fourth concerns raised in this article are the arguments around which Privacy International frames their argument: dystopic of uses of technology. The third is a clear Marxist critique of the currently elevated exchange value involved in privatizing and marketing security solutions. Their study demonstrates that a number of different interpretations to the rise of security and identifying practices can coexist. And, of course, there are counterarguments to be made about the utility and necessity of such measures. What I hope to show by filtering these arguments through the lens of speed is that our sense of “necessity” and “fear” can be interpreted as our understanding of given situations as technological environments reveal them to us. The industries, the buildings and the procedures in which these identifying practices find their articulation are all
invested in “coordinating” the free experience of being mobile. The entire endeavor of these biometric identity cards is to coordinate absolute knowledge of people in real-time.

Perhaps it should come as no surprise that the next generation of biometric scanning is already associated with “non-places.” Vein pattern recognition, or vascular pattern recognition, is supposedly the next potential upgrade in identification and verification technology and it is already in place in ATMs in Japan (another non-place according to Auge). After all, the entire essence of the non-place is to get in and out with as little interruption as possible. Since 2004, bank users have been able to access their finances by bypassing the tedium of pin codes and allowing technology directly into their bodies. “The system works by shining a near-infrared light on a palm placed about four centimeters above a scanner. The scanner takes a snapshot of the palm. The vein patterns illuminated under the skin appear as dark patterns, and it is this information that becomes the basis for security applications. The information can then be loaded into a server or put into an integrated circuit embedded in a cash card and used at an ATM.”

Manufacturers have also fitted the technology to personal computers as a way to secure the laptop for the owner. Bodily surfaces, already captured by the gaze of the infosphere and biometric algorithms, now become permeable. The next logical space upon which the infosphere will impose may very well be inside the human body. Perhaps the next evolutionary site of imposition for information technologies will be to turn bodies themselves into infosphere. If such is the case, we must note that bodily infiltration becomes circulation and that affective bodily experience would be linked to the technical co-constitution of consciousness.

Recalling Virilio’s critique of modern science and its stark detachment from phenomenological experience, biometric technologies increasingly seek certainty of identity through the breakdown of spatial and temporal experience into discrete, isolated digital representations of bodies in the “here” and “now.” This, of course, brackets off lived experience, while simultaneously limiting the amount of non-biometric information that is permissible as part of identity. The penetration of bodies and the breakdown of identity into discrete digital representations, downplays perception as a polluted form of interpretation. Instead, like the scientist who finds the key to physics at the level of the atom, the security industry finds certainty at the level of the isolated physical trait. Yet, this can only be ascertained by technical vision and technical interpretation of living phenomena. Similarly, airport settings may be able to address security through a “one size fits all” approach to screening passengers, such as a uniform system of body scans. The “solution” or the next evolutionary step in airport security is always to subject each and every passenger to an added level of technological surveillance and to add an additional level of technical mediation to the activity of travel. By creating environments where the phenomena of mobility and identification are made replicable and repeatable by screening everyone through the same scanners, officials can isolate the “key” to security by making each person into a discrete, isolated “atom” of digital information. Patrick H. O’Neil writes “the current Information Age further shapes the contours of this technopositivism, to the extent that data (or ‘datification’) is viewed as the key engine of progress. Thus, ‘if you have a problem, define it in terms of information and you have an answer.’”45 (2005, p. 559) Methods and procedures, like the wide-scale use of full-body

scanners, embody “equality” to the extent that they are technically replicable. To the extent that the physical space of the airport can be overlaid with an FAA/TSA approved infosphere, the space and time and phenomenological experience of the security industry experience becomes digitized and technologically interpreted. These methods create a technical vantage point of analysis (the dromological point of view) which is readily rationalized by the average citizen for whom smart phones, ATMs, credit cards, e-commerce and multimedia is the norm. And, of course, there are always those willing to capitalize on hypermodern complacency.46

Critique of Biometrics as a Critique of Privacy

Some scholars identify a concern for privacy as the ground from which a critique of biometrics must be launched. Their primary concern is the sanctity and ownership of the information linked to our own bodies. Privacy advocates view the collection of massive databases of biometric identifiers as a violation of a person’s right to control both their body and the “information body” of their data doubles. Likewise, they consider full-body scanners as too invasive and too revealing. People are not literally undressed by full-body scanners, yet the images of their bodies are transmitted to security officers and appear in virtually naked appearance. Yet, since the image of our bodies is still living information associated with our bodies, these full-body scans actually present

46 The U.S. Congress has, since 1997, been exploring the possibility of privatizing airport security. Post-9/11, federal regulation was passed to standardize airport screening procedures, but there exists a possibility of privately owned, government approved security management. As of September 14, 2010, four U.S. airports have been given preliminary approval to privatize security pilot programs. Reported on Federal Aviation Administration website http://www.faa.gov/airports/airport_compliance/privatization/
a version of a person’s data double. Privacy advocates will undoubtedly argue that bodies and data doubles should be equally protected under privacy laws.

My concern is that political debate surrounding biometrics and full-body scans will ultimately come to focus on the major issue of privacy and will neglect the existential relationship humanity has with their technics. In other words, we cannot simply fear the collection of biometric and personal data. To rebel against this is to rebel solely against the concept of the “archive.” It is essential that we also consider the techno-politics of archives themselves, and not merely focus on their existence as a negative force against privacy. “The constitution of the archive does not consist simply in storing disparate documents together in juxtaposition. The interpretive function of the archontes implies that they make choices: they relate the documents in the archives to one another. In the end, they create an articulated corpus.” (Bell, 2004, p. 150, original emphasis) Through the organization of biometric information into legal categories, government databases allow airport technology itself to play the role of interpreter and to coordinate the data into a language compatible with the discourse (specifically proactive profiling) of post-9/11 politics of security. In this way, airport technical artifacts link individuals and legality to each other in a way that reveals identity to be a relational category that emerges from the exteriorization of self into technical records. The vociferous debate surrounding privacy rights fails to acknowledge this interpretive component of archive management. In fact, I fear that such ardent opposition not only fails to acknowledge the interpretive function of the archive but also succeeds in masking that very relation of power from public consideration.
Critique of Biometrics as a Critique of Identity

To articulate the role played by biometrics in terms of “interpretive” technology remains a controversial interpretation of technology! There are a number of scholars that would surely disagree with my airport analysis. Some argue that the technological/dromological problem with airport checkpoints is a hermeneutic failure. In my preceding arguments, via Bell and Derrida, I endow technology of the security industry with an interpretive capacity enabled by the instantaneous “communication” between machine and database. But, other scholars contend that airport security checkpoints are nothing more than technical “means” that when employed tend to short-circuit the traveler’s ability to hermeneutically establish identity. Of course, I consider this mode of “communication” between computers to be void of a hermeneutic dimension since the instantaneity of the situation and the continuous flow of countless people through checkpoints requires calculation, not communication. However, I do not argue that the “airport experience” is a one-sided mode of identification or security. This is where my thesis diverges from a common current in the theory of biometrics and airports.

I have identified two distinct interpretations of the same critique of government identification practices (two different interpretations that I nonetheless find similarly inadequate). One set of political analysis focuses on the standardization of identity documents, the bureaucratization of means of identification and the elimination of self-recognition as a component of identity. (In other words, this position argues that the give and take of communicative identity formation is short-circuited by the technologization of airport checkpoints. However, there is also another set of commentaries that suggests a much graver consequence of human-technic interaction. According to this latter
argument, the gravest concern facing the “subject” of the modern airport is not the standardization of our (technological) documents, and the marginalization of the role of self-assertion, but rather the external control of the formation of subjectivity. I will address these two points of view in turn.

The first critique of airports insists on the importance of the individual subject, self-knowledge and personal history. This line of argument claims that self-recognition and dialectical processes are marginalized by technological processes. Yet, following this through to its ultimate extension, this argument is essentially arguing that there is a fundamental division between humanity and technics, a disconnect that reaffirms an insurmountable subject/object divide. (I have stated my opposition to this view. See Chapter Three.) This position seems to objectify the “distance” between humanity and technics, arguing that the form of interaction between them, especially when “identity” is at stake, should take a particular form. More specifically, this argument implies that the form of human/checkpoint interaction must necessarily be ultimately guided by human praxis and must ultimately be resolved in the temporality of conscious recognition between two parties. What these interpretations of identity practices fail to take into consideration is the fundamentally constitutive relationship that exists between humanity and technics. In the cases of passport control, since the concept of identity is brought into close proximity with technology, there seems to be excessive resistance toward technology (as exemplified by privacy concerns) and a retreat toward individual consciousness as essential to identity. But, this type of criticism of passports and their corresponding infrastructure fails to take into consideration the ways that the identity of
the human subject is simultaneously being formulated by the airport technical environment saturated by techno-circulation and non-psychical temporal experience.

Some of the scholars that argue the importance of self-recognition are Jane Caplan (2001) and David Lyon (2001, 2008). Caplan discusses the gradual standardization of human identification practices over time. Her discussion of the history of “protocols of identification” begins with the assumption that what is crucial to the concept of identity is recognition. In particular, self-recognition of the body and social recognition of names (both of which retained symbolic local importance) were the crucial elements in traditional self-assertion of identity. The critical contemporary question for Caplan remains who or what is capable of recognizing. In terms of identification, the uniqueness and particularity of each subject is signaled by a name. Literally, each person is symbolized by their name to the people in their lives. The idea of a name was to cite and symbolize, by means of a symbolic word, the distinctiveness of each individual in a communal setting. Caplan argues that as Western civilization became increasingly bureaucratized (during the 19th century) and populations drastically increased, naming regimes (and their local confines) shifted from systems of distinction to systems of identification. (2001, p. 54) Being “distinctive” and being recognized as such became unimportant while becoming an easily identifiable part of a system of identification gained legal and political significance. The role played by the State and highly organized social entities required that identification be done through standardized methods less based on the self-recognition of individuals or their immediate social group. Since standardization requires “stability” and “replicability” of its operations, official documents (technically produced) were seen as a means to stabilize and make replicable
these operations. Through this legal transformation of “identification” from self-recognition to verification, passports become documents of bureaucratic identification of authentic objects (not a communicative or historical individual). This concerns Caplan as the subjective relation between a person and their own names has evolved into an objective relation between verification and object. (2001, p. 65-66)

One of the more striking statements she makes is that her definition of recognition: to recognize is the possibility of relating to something, even if that something is fictive. (Caplan, 2001, p. 52) The more that recognition becomes contingent on technical supplements, such as travel documents and identity cards, the less important self-recognition, personal narrative and personal history become to the processes of identification and verification. In the same way that space and time take on new perceptual meaning through technical supports, spatialized and temporal practices are altered by new technical processes. “The world-view based on orthogonal orthodoxy has given way to a new perception, in which the basic concept of physical dimension has progressively lost its meaning and analytical power as a form of dissecting or dismounting perceptive reality. Instead we find other, electronic means of evaluating space and time, ones that share no common ground with the measuring systems of the past.” (Virilio, 1991, p. 30) Or, in other words, since recognition is “to relate to something” we must not lose sight of the fact that that “something” may not necessarily emerge from individual consciousness or memory, but from technics. For the sake of a regime based on categorizing and identifying its citizens, the “something” being recognized needs to be something that retains its characteristics over time (replicable reference points). Certain bodily surfaces (iris, fingers, facial structures) fulfill this need
by becoming “technical” reference points.

The technical apparatuses of bio-metric passports, specifically those aspects of airport security that coordinate and verify in real time physically perceptible objects with databases of information, operate outside the time of individual consciousness. Recognition in a setting like airports requires that all verification takes place contrary to the time of recognition of individual memory, and therefore, contrary to historical time. The very fact that verification is tied to replicable coordination of perceptible objects (biometrics) demonstrates that the process of verification is fundamentally incompatible with historically evolving notions of self-hood that change over time. In short, Caplan and Lyon worry that the historical experiential body (biometric) no longer maintains the same relationship to consciousness as it did in regimes based on personal recognition. By way of the body, the image of the body, and the signature of the hand becoming intertwined with identification, the relationship between subjectivity and body becomes inconsequential. “Body surveillance reduces identity questions to what can be found in the text of the body itself. It bypasses the acting subject, who may wish to explain herself, or to put things in a longer historical context, by appealing only to the speechless ‘truth’ that DNA samples or hand scans can provide.” (Lyon, 2001, p. 306)

From the perspective of Caplan and Lyon, we are able to weave a political narrative about the way that identification documents (technical artifacts) disaffiliate themselves from the individual subjective experience of their holders and the ways in which political regimes of State power are able to capitalize on this technically established divide. These documents relate to the “person” to the extent that they relate to the body, but not to the individuation processes of the embodied individual and their
surroundings. It is this same division that forms the crux of the debate I introduced at the beginning of this chapter. On the one hand, we see Mark Salter advocate for a technical uniformity of screening bodies with full-body scanners while others advocate more thorough passenger profiling based on face to face interaction. The question political theory must ask is not which processes allows for the self-assertion of identity (the answer is obvious and the practical demands of airports necessitate moving toward technical mediation.) The question that must be asked is what are the future implications of all infospheres (and their frequency and scope are increasing) gradually embracing technical verification of identity and leaving behind social recognition. What will become of social interaction inside any infosphere?

What this means is that a Caplan/Lyon analysis is selective and it somewhat overemphasizes the role of the self-asserting subject in the formation of identity while presenting a limited idea of recognition as basically social recognition. The subject that is no longer able to assert oneself in the face of authority is simultaneously confronted by an authority that is no longer able to recognize. I use the term “able” very deliberately and I will show below that the technological infrastructure of airports and the security industry is just as limited in its capacity to recognize as the subject passenger is in their ability to assert their own identity. It is not a simple matter of the setting and technological surveillance “creating” a subject, as Foucault and Adey argue. Rather, an infosphere, such as an airport, technologically limits itself by accepting only pre-approved forms of information as being allowed to be expressed or received. Passports play the crucial link between the suddenly silent subject and the technologically overloaded “social.” The passport contains the information that is either approved or

rejected and the authenticity or legality of its very presence comes to dominate the process of identity, rather than recognition. The passport is an object of inspection in its own right. These documents are checked thoroughly for forgery, expiration and tampering. And, in today’s airport setting, machine readable passports specifically designed to facilitate inspection and verification form a very important cog in a system of flowing information. I suggest that we cannot simply address the politics of biometric identification by assessing the fractured relationship between passport and passport holder. Careful attention must also be paid to the larger setting of inspection and the ways in which authorities on the other side of the computer terminal are involved in this process. Newer passports are specifically outfitted so they can be read by machine scanners. The passports, the scanners, the databases of comparable information, the screens on which the comparison is displayed and the person looking at these screens form a complex network that requires little if any subjective knowledge of the passenger to be effective. Likewise, the type of knowledge that the authority must possess is a technical knowledge of how to read the technically mediated information of the passport. From the point of view of a security official, these systems ultimately present pertinent information to them in a way similar to how a thermometer presents information to a scientist in a laboratory.

In a historical analysis similar to that of Caplan, Gerard Noiriel discusses the transformation of civil status with regard to identity documents in France. He noted that in France, bureaucratized and formal means of identification were preceded by identity based on local proximity, citizen spectators, communal forms of recognition, and religious confirmation. As skill sets developed (general education proliferated reading
and writing amongst the population), written documents became more viable forms of identification. (Noiriel, 2001, pp. 29-30) As government bureaucracy developed, the processes of identification became more and more administrative, which required that the authority of written documentation be elevated. (Noiriel, 2001, p. 43) The written word, as a form of authority, began to challenge localized ritual or history. And, more specifically, a discrete, visual identification document could be linked to a visual body, rather than a form of identification based on local memory coming to presence in a testimony.

I extend Noiriel’s analysis from the elevation of the written word to the elevation of the digital code. In taking into consideration the socialized context of writing and the technical context of codes, we can overcome Caplan’s overemphasis on self-assertion and view the experience of biometrics as a socio-technical phenomenon. The biometric passport is the newest “mnemotechnical48” tool in political identification that preoccupies the authority’s field of immediate perception, a tertiary retention that blocks the hermeneutic constitution of “identity” which involves the immediately present person. From the point of view of the contemporary airport infosphere, the readable text of the body (as opposed to the vocal protestations of the subject) must be elevated to a position of authority, beyond that of all previous texts. When the memory power of biometrics can be called forth in the blink of an eye (literally) from databases with infinite depth, the biometric infrastructure subsumes the subjects and objects of surveillance into a static

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48 Stiegler describes the mnemotechnical as the culmination of two processes. First, human action, including the capacity to remember becomes “grammatised,” which means that dynamic organic processes are reduced into discrete elements of production. For instance, the combination of neural signals, muscle movement, vocal cord vibration and deliberate manipulation of air enables speech. Writing is a grammatised form of the flux of these actions as a discrete representation of the phenomenon. Secondly, discrete actions are deposited into technical tools, like a system of writing, machine tools in production processes, etc. Stiegler defines these as mnemotechnologies. It is my contention that regardless of the phenomena grammatised, mnemotechnical encounters are endowed with a capacity to transform politics.
“relationship” more appropriately described as a dynamic “calculation.” Stiegler warns of the danger inherent in the “hyperindustrial” resource of archived, “dead” memory. He describes

“the exact moment when the extraordinary mnesic power of digital networks make us all the more sensible to the immensity of human memory, which seems to have become infinitely reactivatable and accessible. This seeming paradox means that the question of hypomnesis is a political question, and the stakes of a combat: a combat for a politics of memory, and more precisely, for the constitution of sustainable hypomnesic milieux.” (Stiegler, 2008)

Conceptually, biometrics make it clear that what can be “known” or “accounted for” totally depends on the way (the setting, the method) in which the object can be interpreted by the authority figure. We can refer to this human-technical interpretation as a hermeneutic relationship with technology. “The transformation made possible by the hermeneutic relation is a transformation that occurs precisely through differences between the text and what is referred to.” (Ihde, 2003, p. 516) However, complications arise when we consider that making a body readable is not a simple transformation between (a) passenger- (b) screening device- (c) screener. The body must first be discretely reduced to a series of genetically unique objects, then translated into a code which can be inscribed on a biometric passport, then interpreted and represented by a machine. All this must take place before the viewer (the security officer) has the opportunity to interpret the data at all. As biometric data doubles, passengers are not knowable unless their biometric traces can be made readable. While Caplan makes it clear that this hermeneutic process lacks a moment of self-assertion by the passenger subject, it is simultaneously the case the interpretive experience between airport

personnel and machine interface forms the other side of this problematic. This brings me to my discussion of additional airport political scholarship that fears that the concept of the “social” has been replaced by some sort of human-technical continuum, and, therefore, the very notion of recognition is rendered obsolete by the functionality of the infosphere. According to this point of view, even the “interpretive eyes” of the airport official cease to interpret and begin to generate subjectivity itself.

Despite its fatalistic tone, the area in which such an argument is an improvement over Caplan’s is that it lessens the strict opposition between people and technology. As I have argued in earlier chapters via Stiegler, and even Winner, the core of human interaction with technology is never a strict opposition or an irreducible subject/object or user/tool divide. The technics with which we interact are never simply tools, but rather at various times extensions of our bodies, enhancements to our interpretive capacities, mechanical or mnemotechnical replacements for our habits and thoughts or even an encounter with a radically different “other” that brings the human life into stark relief. What the latter argument accomplishes is demonstrating that the “technical” always already constitutes the “social” of which individuals passengers are inseparable. Additionally, it incorporates the main concern of “classical” philosophers of technology by addressing the ways in which the historical accumulation of technical influence is beginning to outweigh human presence and self-recognition in key moments and places in the post-industrial society.
Conclusion

I have argued earlier (Chapters Three and Four) that technology retains a particular power to constitute the possibility of experience for humanity. When the body is reduced and cataloged by technology, the biometric traces that emerge are a new technical entity themselves. These immaterial digital traces, in turn, play a role in the constitution of the airport experience for the subject to whom they initially referred. Co-existing with the traces creates a condition in which the human consciousness is simultaneously informed by bodily experience and by the technical process of translating a “memory” of the body into information. “As such in a context of uncertainty and fear the body is turning decisively into a source for prediction of actual or future dangers and risks.” (Ceyhan, 2008, p. 118) The body functions as a resource within an infospheric environment rather than a visitor or an intruder. The relationship between a body and its biometric trace is not a perfect correspondence, but rather a transductive relationship based on a movement of information. Thus, in terms of a security check point, it is impossible to think of the passenger experience in a Foucauldian sense of “the making of the subject” without also thinking in terms of the presence of the subject (as a digital trace) in the process of subjectification itself.

When we reconsider that the role the security officials (and computer scanners) play is to inspect passports more so than passengers, it becomes clear that the role they play relative to the individual passenger is to enable inspection rather dialectic recognition. Less a product of an inert individual and more a product of technological social “other,” the airport and its infrastructure can be seen as an unresponsive other, unresponsive to traditional notions of identity formation that require a certain temporal
experience of recognition. This is crucial as an analysis like Caplan’s seems to suggest that identification tools rob the passenger of their political voice. In reality, the social, technological network of biometric verification is the inert, lifeless unresponsive “other” that translates “identity” into a practice of recognizing pure, biological life markers. The voice of the subject may not be lost. It may just be falling on deaf technical ears.

Stiegler claims “hyperindustrialisation is the generalisation of a mnemotechnological reproducibility of the motor behaviour of consumers. Just as the producer – whose gesture is reproduced, and whose know-how passes into the machine, which turns him or her into what is called a proletarian --, the consumer is divested of his savoir-vivre, his know-how-to-live-well, and she finds herself in the same stroke desindividuated.” (2008) However, the “know-how-to-live-well” is knowledge that evolves just as the formation of consciousness evolves through its constitution in different (typically “faster”) technical temporalities. The passenger, the consumer of mobility, in most settings is marginalized and disindividuated by the reduction of social practices to instances of information sharing. But, airports are settings of authority whose smooth operation and security represent State’s political power. In such environments, the State has a strong interest in fashioning a technological infrastructure that ensures security over a responsive forum for democratic lived experience. It is no surprise that the political response to September 11 has included the importing of technologies that create the conditions for a “one-size fits all” mode of verifying passengers. But, it is now coming to light that consequences of these decisions are not limited to questionable infringement into a person’s privacy. These technical conditions
are also deeply implicated in the practice of establishing identity, the orientation of social attitudes, the formation of human consciousness and the politics of memory.
Ch. 6 Being in Information

In the introductory chapter of this project, I made a reference to what I call “habitable circulation.” Through my abstractions about technical interconnectivity and information flows, as well as some inductive analysis of airport infrastructures and procedures, I have attempted to contextualize the concept of “habitable circulation” as unique to hypermodernity without really unpacking what I take the term to be. I will conclude this project by coming back full circle and explaining how the hypermodern experience is played out in a very particular form of habitable circulation. I argue that inhabiting in hypermodernity involves individuation processes played out through information (as an external “other”) and a dynamic, simultaneous constitution of infosphere space itself. Through a summary of this project and recapitulation of major themes, I will describe what constitutes technical circulation, how the conditions of circulation are “habitable” and how, in certain manifestations, this is unique to hypermodernity. This project is an attempt to theoretically describe the mode(s) of human experience that emerge only through human and technical co-presence, both in the form of direct engagement with technical objects but also in the ongoing negotiation that occurs between discrete moments of engagement.

Though I borrow the term from Virilio, I mean for this chapter to bring to light “habitable circulation” in very different way. According to a Virilian understanding of this term, the ongoing militarization of social organization is largely accomplished by organizing space along strategic and logistical calculations. The technological evolution

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50 In the 1960’s, Virilio detailed “habitable circulation” in urban studies and architectural theory. In order to briefly describe the term in a Virilian style, I am drawing on more contemporary work by Bratton (2006) and Armitage (2000). I do this because their commentary on “habitable circulation” already takes into account Virilio’s turn from architecture studies to dromology and this better suits my current discussion.
of transportation and communication, coupled with increases in human population, required that cities organize space in such a way that the circulation of people and objects could be efficiently controlled and/or monitored. (Armitage, 2000, unpaginated) As cities grew, the problem of coordinating the flow of capital and bodies found a technical solution in designing space to facilitate controllable circulation. In this sense, “circulation” is simultaneously the description of the habitable place and the description of the mode of social control. But in this definition of habitable circulation, one can see Virilio’s insistence on separating the human from the technical by means of space. The city is in an ongoing state of transformation by means of circulation. People, on the other hand, are not transformed by the same processes. They are imposed upon by the acceleration of life processes, but all that “changes” is their capacity to negotiate the city. One gets the sense that a person could extricate themselves from circulation by leaving the city and escaping the trappings of technological devices or organized transportation infrastructures. This point is reinforced when Benjamin Bratton points out “If the city is a collective prosthesis of its inhabitants, other technologies are for a more individual, specific purpose, for example the car.” (Bratton, p. 15, 2006, original emphasis) The development of the car as a mode and tool of circulation “became a social assault on space.” (Virilio, quoted in Bratton, 2000, p. 15) Rather than declaring that the person has become “automobile” (or declaring that the person has become part of circulation), Virilio focuses on the changes to spatiality and it remains for the unmediated individual to cope with this external change of space. In this sense, “habitable” situations describe a given space or the context of interactions. The city space is habitable.
Over the previous five chapters, I have expressed my disagreement with the implications of this interpretation of “habitable circulation” by developing a contrasting notion of hypermodernity as a mode of being in the world via the excess of electronic (inter)connection. I argue that living in information saturated environments (as many daily habits require us to do) as a mode of being in the world needs to be considered not only from the point of view of the individual, but from the point of view of the habitable. By this, I mean that “living” is a form of becoming, of bringing forth a constantly reinvented type of human consciousness through experience by means of prosthetic supplements. Empirical descriptions of “circulation” will undoubtedly focus on the modes of transportation and communication technology, measurements of speed (in the traditional sense of duration or distance over time), and the analysis of interoperability of computer software. An analysis of this sort may provide an empirical foundation for the theorization of speed and circulation as organizing principles of social determination. Indeed, David Beard and Joshua Gunn (2002) argue that Virilio’s dromological analysis “make(s) the leap into connecting technologies of perception to ideology (rather than epistemology).” However, to explore the truly co-constitutive, ongoing aspect of the human-technical ontological relationship, the central object of my investigation must be habitation (living life) itself. Recounting the dual-structure of experience that I attribute to speed, it is less political in the way the instrumental capacity of “technologies of perception” direct the flow of political power than in the way that speed structures and frames human orientation towards the multitude of transductive relationships constituting the world at any given space or time. An analysis that takes both the social and phenomenal aspects of circulation into consideration is more indicative of the
hypermodern mode of existing in the world than a logistical or ideological interpretation of circulation alone.

“Habitable circulation” as a concept must aim to tie a critical understanding of the political implications of circulation together with a phenomenological understanding of the ways in which circulation can be experienced. I argue the flux and flow of life is an unfolding process of human-technical interactions enveloped in social and technical contexts. (For instance, Beard and Gunn’s observation that Virilio is tying technology to ideology is a too narrow conception. This theoretical leap means that Virilio simply converts the technical (or, the technical phenomenon) into the political. What is needed is a conception of human-technical interactions that is dynamic and defined by the co-constitutive nature of both poles, the individual and the milieu.) The modes of experience people have with technology vary from context to context. I remind the reader that hypermodernity is an emerging set of conditions in the post-industrial world. The concept is not intended to describe all living contexts in the 21st century, but rather to draw attention to certain physical environments that organize their functionality around the flows of electronic information, where actor and space are mutually dependent on the dynamism of the other. In order to scale down the analysis of human-technical interactions, I have limited my definition of hypermodernity to describe only certain technical contexts housing interconnected databases which collect, record and distribute information about people’s repeatable habits. By focusing on these specific contexts (such as commercial, Western-style airports) the connection between the political implications of circulation and the phenomenological implications of habitation can be observed.
The field of human geography has recently produced a number of very like-minded interpretations of the lived experience that emerges from the transductive human-technical relationship. (See Thrift, 2005, Kraftl and Adey, 2008) One study even finds that not only the subject, but space itself emerges as a result of transduction. Space is “continually being brought into existence through everyday transductive practices.” (Dodge and Kitchin, 2005, p. 162) To understand how “the world is revealed” to us through modes of circulation, we must first understand in what way the hypermodern individual inhabits the world. Therefore, to conclude this project, I return to Heidegger’s concept of “dwelling” as guide for exploring habitable circulation.

In his lecture “Building Dwelling Thinking,” Heidegger draws a distinction between “building” and “dwelling.” But, he warns the reader that one should not view them as opposing or antithetical terms. He points out that in today’s language, “building” is often thought of as an activity, while “dwelling” is thought of in the opposite sense of inactivity or a lack of engagement with the external world. If we were to adopt these meanings of “building” and “dwelling” then “The latter, building, has the former, dwelling as its goal.” (Heidegger, 1993, p. 347) However, “dwelling” in the sense Heidegger intends, is not a condition of being at home in a house or withdrawn from the world. We do not dwell in a place as the result of having built the place. Of this misconception, Heidegger said, “as long as this is all we have in mind, we take dwelling and building as two separate activities, an idea that has something correct in it. Yet, at the same time by the means-ends schema we block our view of the essential relations. For building is not merely a means and a way toward dwelling- to build is in itself already to dwell.” (1993, p. 348) Thus, the distinction Heidegger wishes to draw
between building and dwelling is not a contradistinction between activities, nor a
distinction between means and ends. He is making the point that building is possible
because people dwell, they are dwellers. Building is predicated on “the manner in which
we humans are on the earth…dwellings.” (1993, p. 349) As Heidegger claims that
dwelling is for humans to exist on Earth as they are (indeed, as the character of Being
itself), he concludes that building is a particular form of letting dwell.

What all this means in the context of my analysis is that building places (actual
concrete structures), communication and utility networks, interconnecting route ways or
intermediate spaces, all impact the possible future understanding of dwelling. Depending
on the types of buildings or spaces we build, we often come to be habitually present in
these places (or inhabit these places.) And, if the habituation of our habits is becoming
increasingly “technological” (calculative, instrumental), then building ceases to be a
mode of letting dwell and becomes an obstacle to understanding the project of society as
anything other than instrumental ordering for maximum efficiency (akin to Virilio’s
understanding of the organization of space). In this way, building as a means to make
inhabiting (and habituation) possible, rather than as a mode of letting dwell, is directly
tied to Heidegger’s critique of technology as a mode of engaging in the world from an
instrumental and calculative point of view.

Demonstrating a Heideggerean link between building, inhabiting and technology
is only the first step of analyzing the actual mode of experience of inhabiting information
as a form of circulation. At this point, I must move beyond worldly modes of dwelling
and building to get at the core of what it is to inhabit circulation and it consequences.
There are two possible paths I want to discuss. First, Heidegger’s “Building Dwelling
Thinking” lecture includes an existential model of the experience of space, spaces and the relations between them. Alternatively, there are a number of scholars that dissolve the divide between technology and its function as a form of revealing Being and treat technology (and technics) as constitutive of the human as well as space itself. My earlier chapters have made it abundantly clear that I will side with the latter interpretation, but it is worth discussing the consequences of ignoring Heidegger’s admonishment to “pay heed to these relations between locales and spaces, between spaces and space…” (1993, p. 358)

According to Heidegger, space is not a pre-existing physical area. Spaces do not exist as the possible condition from which building can take place. Rather, inversely, by building a structure (as a mode of dwelling), a locale is generated, which “gathers” or relates other elements in the surrounding area. Heidegger’s example is that of the bridge. By placing a bridge in a particular spot, the bridge unites two particular banks of the river, it connects roadways on both sides of the river and it creates a crossing for people. The way the bridge gathers these elements together is also the way that space comes into being. Space is something for which room has been “made.” The gravest misinterpretation of space is that the properties of spaces, such as physical dimensions, are attributed to them as their defining feature. This applies a Western scientific, mathematical logic to spaces which, like Heidegger’s interpretation of the technological, enframes the world in a particular way. In order to show that the “foundation of modern thought and knowledge is essentially mathematical,” Heidegger argues that the concept of mathematics amounts to “the things insofar as we take cognizance of them as what we already know them to be in advance, the body as the bodily, the plant-like of the plant,
the animal-like of the animal, the thingness of the thing, and so on. This genuine learning is therefore an extremely peculiar taking, a taking where one who takes only takes what one basically already has.” (1993, p. 275) If spaces are conceived this way, engagement (inhabiting) in the spatial world is done from a certain functional point of view. The interpretation of space would come from a pre-existing understanding of “space” as a set of physical dimensions that is organized in a particular way to achieve a particular purpose. Heidegger cautions against bringing mathematical or calculating notions of space into an interpretation of space and reminds his readers that “because it produces things as locations, building is closer to the nature of spaces and to the origin of the nature of ‘space’ than any geometry and mathematics.” (1993, p. 360)

The consequences of conceptualizing space as mere physical enclosures should be obvious. If we think of space as nothing more than its physical dimensions, then we are likely to think of our actions in space as the means to carry out specific ends in the context of the distance that space gives us. Space, then, is yet another aspect of the world that can be brought under instrumental control and the technological attitude has conquered the “space of being.” However, Heidegger’s alternative notion of space as emerging from building as dwelling isn’t without its own negative consequences. If one wants to follow Stiegler’s lead and think of humans and technics as constitutive of one another, then Heidegger’s notion of inhabiting a space seems static. Either a person is dwelling in a space harmoniously with the surrounding objects or else the surrounding objects foster a calculating attitude in the person. Neither mode of inhabiting leaves much room for a dynamic engagement in the world that changes both the human and social space at the same time. Moreover, the conceptual process proposed by Simondon
that so enticed Stiegler, individuation as process, is similarly hampered by Heidegger’s insistence that space and the everydayness of being in space (dwelling) are decompositions of “building.” Stiegler argues in contrast to Heidegger:

there is neither difference nor the tension in Dasein between the I and the we: Dasein is not an I. It is neither, properly speaking, a we: it is prior to this kind of distinction, but it does not contain this distinction either. And this is a problem, I think: for it does not allow us to fully interrogate the tension and the dynamic phase-shift that is, by contrast, constitutive in Simondon and allows us to think individuation as process, a process that does not denigrate the collective and that also avoids thinking Entschlossenheit as a decision limited by being-towards-death. (2009, p. 48)

I argue the flux and flow of life is an unfolding process of human-technical interactions enveloped in social and technical contexts. Spaces of experience are not defined purely by human intention or technical functionality. This is because “the technical” isn’t a set of value-neutral artifacts. It is, according to Stiegler, a constituted cultural environment of exteriorized human memory, behaviors and ideas. Spaces come to presence as a result of the human-technical relation itself, not as Heidegger would suggest through the originary impulse of building. Heidegger is correct that dwelling is the condition of Dasein that makes building possible, but it must also be demonstrated that to dwell is a dynamic, evolving relationship to begin with. We need a concept of space that can accommodate this dynamic formation of the human, not simply as a decomposition of human practice, but more of a co-constitutive component of the individuation process. I think the concept of habitable circulation, as a realm of constant movement between the activity of life and the activity of non-organic processes, can account for the co-constitutive relationship between humans and technics.
The conception of space as nothing more than coordinates and distances that can be explained in terms of geometrical measurements can be referred to as an “absolute ontology of space.” (Dodge and Kitchin, 2005, p.171) Clearly, this concept is not a valuable resource for evaluating infospheres as spaces defined by the technical flow of information, when the idea of technical flow itself presupposes a limitless series of human and technical interactions. It makes no sense to think of the flow of information in terms of geometric coordinates when many flows occur in virtual space and penetrate the space of the body. In recent scholarship, the conception of absolute ontology of space “has been challenged by relational ontologies that suggest space is transductive and repeatedly reestablished itself in relation to human activity. This ontogenetic conception of space acknowledges that the forms and spatial relations of the world around us are clearly not static and fixed; they are constantly being altered, updated, and constructed in ways that alter socio-spatial relations.” (Dodge and Kitchin, 2005, pp. 171-72) Clearly, this understanding of space is helpful in analyzing infospheres, which are spaces that, by definition, require the constant flow of both bodies and information. These flows ensure that infospheres are the furthest thing from a static setting that somehow settle into spaces of repetition and habituation. However, despite being an improved theoretical conception of space for the analysis of technologically constituted environments (relative to the geometric concept), my analytical construction of the infosphere is more complicated than that which can be explained in terms of the transductive productivity of only human-technical relations. In other words, simply saying that the space of the infosphere is the result of mutual human-technical reactions misses some of the major points of my analysis.
Referring back to my discussion of biometrics as a new component of infospheres will demonstrate the inadequacy of both conceptions of space outlined above. Whether biometric information is collected “live” at the airport by asking people to submit to some sort of scanning, or if the biometric data has been previously collected and embedded into an identity document which then needs to be presented at the airport, in each case the logic of the biometric identification process is spatially determined. Biometric identification identifies the unique individual by analyzing patterns, shapes, contours and lines of the space of the human body. The managerial decision to allow or disallow access to the infosphere is informed by a number of factors, but one major one among them is the constant “measurement” of body space. Some of the rules and procedures of the infosphere are predicated on the conception of space as measurable. Some are predicated on the management of timetables. While the experience people have in airports isn’t simply constituted by their experience at security checkpoints, it needs to be pointed out that a number of different spatial/temporal management techniques structure the types of experiences that can occur within the infosphere (for instance, by allowing or disallowing access.) Thus, if we adopt the notion of space as “ontogenetic” and “transductivize” and always emerging out of the assembled collections of human practices, we must also remember that some of these experiences must be constituted in the face of what Heidegger warned us against: predetermined, technologically reinforced, calculating ways of thinking about human practices. Indeed, one could even wonder if the politics of the War on Terror (the politics that instigated all the upgraded security measures post-9/11) are constituted in such a way that that the very possibility of human experience in secure zones and infospheres is reduced to the question of allowing access. After all,
information circulation, as countless technical interfaces seamlessly linked, forms a mutually referential world of objects. Perhaps the human-technical interactions at the center of the transductive emergence (emergence of the human, the technical and space itself) are already subjected to the spatial logic of circulation itself and the human component of experience, while not eliminated, is significantly marginalized.

As I have suggested throughout this project, the analysis of the modes of circulation can only partially explain hypermodernity. As I stated in my introductory chapter, hypermodernity isn’t an era of historical time. Rather, it is the spatial and temporal experiences that are made possible (or structured) by the relationship between humans and technology in physical spaces dominated by information flows. On the one hand, this definition of hypermodernity is transductive as it acknowledges that the conditions of possible human action are mutually constituted by the acting subject. But, it also takes the ontological relationship between humans and technics (how we orient ourselves towards the world through a technical attitude) to be more influential in how society shapes space than the internal dynamics of the space itself. In other words, while the hypermodern experience doesn’t deny Dodge and Kitchin’s claim that space is transductive, it does require us to rethink agency and self-determination as limited by the very way we (ontologically) allow the world to reveal itself to us. Thus, the logic of circulation doesn’t limit or constrict human action. The way that we orient ourselves towards circulation, the way we understand it, is an internalized self-restriction.

For this reason, “habitable circulation” as a concept needs to be thought from the point of view of how we, as humans in the technical world, inhabit the spaces of our own creation. Conceptualizing our modes of inhabiting the world (or of inhabiting circulation)
as transductive offers more explanatory power than a notion of space as transductive. If Heidegger is correct in his proclamation that dwelling is the primary character of Being, and Stiegler is correct that the default origin of the human is technical, then inhabiting circulation by means of ongoing interactions with the infosphere is the result of multiple, habituated transductive processes. Spatial transductions are just one of many factors that influence how we experience the space and time of infospheres.

*The Politics of Inhabiting Infospheres*

I have already discussed in detail the dual structure of hypermodern experience. While experiencing by means of interacting with technics is a timeless mode of human action, the dual structure of experience did not become pronounced until the emergence of 20\textsuperscript{th} century information technologies. The political implications of the dual structure of experience need to be examined. A dual structure exists in coming into contact with interactive information technology. In this context, a person experiences both the instrumental use of a technical object and also an increasingly intense connection to the surrounding world of information flows. A tension exists in actions that are simultaneously diffused locally and remotely. Yet, this tension, which should provide a ground from which self-reflection could occur, tends to remain obscured. The organization of spaces as infospheres requires inhabitants to adopt a strict set of social behaviors and social attitudes if the infosphere itself is to continue functioning. Recall the example of the airport: people need to behave in a certain way, submit to certain processes and accept certain modes of government control and surveillance if the airport is to continue circulating information. When people think of their experiences in airports
as discrete experiences with obvious goals, the behavior they are asked to adopt appears rational. Furthermore, the passenger will tend to unconsciously block their understanding of the dual structure of experience as they focus on performing the actions necessary to become mobile travelers. They lose sight of their place, their role, as inhabitants in circulating information. Instead, they focus on performing the immediate, local means necessary to achieve the ends of mobility. In this way, the human-technical mode of constituting one another is dominated by technical rules and procedures such that the person is only unconsciously involved in the transductive relationship. But, perhaps it is possible to rethink the human-technical relationship so that people can take a more active role in their own constitution as political subjects in a technical world.

A brief example will help demonstrate the political potential of rediscovering the tension that now lies obscured in the dual structure of experience. In the introduction chapter of this project, I mentioned the recent escalation of TSA security screening measures as a direct response to a failed attempt to bring down a Detroit bound airliner. In this particular case, a person successfully hid explosives on his body, in the groin area, and was able to pass through the existing technical security checkpoints. The U.S. government identified the need to inspect bodies even more thoroughly as critical to the security of the transportation industry, and by extension, to U.S. territory. The impractical, time-consuming aspect of investigating each body by hand led the U.S. government to embrace the use of full-body scanners. In essence, the processes needed to be sped up through technical machines. Scanner use has gone from intermittent to extensive and the numbers of scanners in airports continues to rise.51 These scanners are

Accessed on January 19, 2010
specifically designed to reveal every surface of the human body (which, of course, is an even deeper penetration of infosphere technology.) By making all surfaces of the body knowable, and circulating this collected information so that it can be analyzed (i.e., by intensifying the relation people experience with the infosphere), airports are able to continue processing huge amounts a passengers without much additional delay.

Obviously, there is a practical motivation for the State to embrace this type of technology. The functionality of the airport (and the surrounding transportation industry) can persevere. However, unlike many of the technological interfaces that constitute the infosphere, the full-body scanner has captured public attention and elicited a very political response.

For a variety of reasons, the U.S. public has begun vocalizing concern about the body scanners, the conduct of airport security screeners, the way that some aspects of this screening process occur in the full view of other passengers. A grassroots movement to resist the use of body scanners has been gaining steam. A recent article reports “Fueled by two new websites — OptOutDay.com and WeWontFly.com — as well as by several awkward, security-point frisking videos that recently went viral, movement members are vowing to unleash a surreal spate of Nov. 24 disruptions just as millions of Americans fly off for annual family feasts. Atop the protesters’ tactical list: urging passengers to “opt out” of full-body scans, forcing TSA employees to instead administer ‘enhanced,’ hand-sliding, pat downs that can include feeling a person’s inner thighs and buttocks.” It should be noted that November 24, 2010 was the day before the Thanksgiving Holiday, traditionally one of the busiest travel days of the year.

52 http://www.msnbc.msn.com/id/40242420/ns/travel-news/
Accessed November 18, 2010
What is noteworthy about the protest, for the context of this analysis, is the suggested mode of protest. People are not encouraged to stay home and not fly. They are encouraged to opt out of the full-body scan and to receive the traditional pat down. The government has always maintained that a choice exists for passengers to undergo either form of screening. Therefore, there seems a reasonable outlet for people that do not want to subject themselves to revealing body scans to protect their privacy. The organizers of the protest even cite that privacy concern and unreasonable searches are a key concern of theirs. However, the mode of protest, to increase delays by opting for pat downs, still requires what many believe to be an uncomfortable invasion of their personal space. The protest isn’t designed to rebel against this invasion. The protest is designed to demonstrate that, in the larger picture of the entire commercial air industry and government regulations, people don’t really have a choice but to submit to the body scanner. The protesters have realized that an obscured tension does exist in the dual structure of experience. Submitting to body scans is simultaneously submitting behavior and attitudes to the infosphere. There here and now experience of that submission ties people (and very personal, private information) to the larger flows of information, to the circulation of bodies, to the commerce of the air industry, and to the efficacy of government security regulations. By recognizing that the information generated from their bodies is a contingent part (indeed, a transductive component) of the functionality of the airport space, they have tapped into the tension that exists there and organized a political movement that brings that tension into focus for others to see. By reversing the typical obscuring effect that characterizes the dual structure of experience, the protest demonstrates that the “alternative” to the infosphere is not a viable option. As the airport
space is configured now, there is no legitimate social alternative to submitting to the infosphere. Thus, moving forward, the political response to technical circulation must always take into consideration that what has been rationalized as “efficient” must be compatible not only with the technical functionality of our habitable spaces, but also with the political concerns and beliefs of that space.

Moving forward, is there an alternative to organizing complex social spaces that must monitor “access” other than by means of technical circulation and infosphere imposition? Is the “imposition” of information flows onto the architecture of social spaces always a political imposition on the subject? These are some of the questions that need to take center stage in future policy debates. The language of trade-offs (for instance, an exchange of some degree of personal privacy in exchange for more security) has dominated these kinds of policy debates. Organizing debates around this style of zero sum argument frames issues as two competing social values within some sort of mythical social hierarchy of social values. Moreover, these debates tend to describe the technical components of the actual social settings in instrumental terms (as mere tools) that are deployed by one social group or another. This project has sought to advocate a phenomenological approach to comprehending technical space. Human-technic interactions need to be considered not as discrete moments of time, but rather as constitutive to the way that people organize their attitudes, beliefs and behaviors. Focusing on how we inhabit certain spaces may provide a very practical theoretical ground for determining how a society arrives at decisions about the social organization of space. My project is not designed to advocate certain social positions on the use of technology. Its aim is to demonstrate that the “meaning” of a technical object only
emerges from its practical presence in the world of human engagement, and in particular the way that the technical object is spatially and temporally received.

Inherent in the modern style of technical operation (speed, connectivity, circulation) is the tension that emerges from practical human engagement with technology. Addressing the tension that exists in how we experience through technical devices is necessary in order to address social values in relation to the technical. It is my argument that hypermodern citizens have become increasingly “blinded” by technical circulation, speed and connectivity associated with hypermodern settings. They are not able to bear witness to the dual levels of experience that simultaneously inform the changing political meaning of hypermodern settings. Yet, it is the tension that emerges between “circulating” and “inhabiting” that is (to use Heidegger’s term) a clearing from which we can stand back and evaluate the political relations that emerge between technology and people.
Bibliography


Date Published: 5/6/2010
(Accessed July 6, 2010)


(Accessed December 23, 2009)


Hunter, Marnie (2009) “Body scanners not 'magic technology' against terror.”
search (December 31, 2009)
(Accessed on January 19, 2010)


Date Published: June 24, 2004
(Accessed September 12, 2010)

Lafferty, Catherine (2008) “City Airports-Part of the Urban Fabric.”
http://www.airport-technology.com/features/feature1776/
(Date Published: April 15, 2008)
(Accessed November 4, 2009)


Bibliography


http://www.faa.gov/airports/airport_compliance/privatization/  
(Accessed September 23, 2010)

(Accessed July 3, 2009)

http://www2.canada.com/france-threatens-blacklist-yemenia-over-crash/1757307/story.html?id=1757307  
“France Threatens Blacklist for Yemenia Over Crash” as reported by Canada.com July 3, 2009  
(Accessed March 12, 2010)

http://epic.org/privacy/body_scanners/epic_v_dhs_suspension_of_body.html  
(Accessed 3/21/11)

(accessed on 01/31/10)

http://www.icao.int/  
(Accessed April 1, 2008)
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