Technotopic Narratives & Networked Subjects: Preparations for Everyday Life in Cooltown

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Abstract

This paper analyzes Hewlett-Packard's web video vision of "Cooltown" technologies, considering how certain technology-themed texts narrativize media use in the near future. This is a future where technology creates a safe haven for the smooth flow of capital and labor while simultaneously furthering the enclosure of bodies and subjectivities within the ubiquitous networked media apparatus. By mapping the dominant discourses that corporate narratives such as Cooltown work within, we can more easily identify those alternative narratives that can open up future possibilities rather the closing down and limiting the potential range of future political economic and technologically mediated realities.

Introduction

The image above was at one time on the front page of Cooltown.com. Presently there are fourth videos for visitors to watch. Click here to view a copy of the first and original Cooltown video that is the object of analysis in this paper. This file is in RealMedia format.

An important body of critical work has emerged in the last few years describing how academic and popular publications on Internet/new media technologies are inscribed within discourses of utopia and futurism. Collectively this scholarly work has produced some powerful and diverse critiques from which to begin to build a critical new media studies. For the purposes of this paper I use several of these critiques to consider how a specific narrative presenting a future of perfected capitalism is situated within the different and sometimes contradictory discourses of new technologies. The object of this query is a streaming video available on computer giant Hewlett-Packard's promotional website, Cooltown.com, which offers HP's world view of how new technologies will be used and dispersed within the everyday lives of the "citizens of Cooltown" (i.e. in the imagined first class suburbs and businesses of the near future).

In attempting a discursive analysis [1] of this video, I want to illustrate how the future is enframed within the narrative where information and communication technology is ubiquitous within the lived environment, allowing for the free flow of capital and labor while furthering the enclosure of bodies and subjectivities within the machine, the networked media apparatus. Richard Coyne writes that "there are incommensurabilities and disagreements in digital narratives, many of which have yet to surface, but their airing can only be productive" (Coyne, 2001, p.15). Taking up Coyne's call for analyses of digital narratives, the goal of this paper is to complicate theories of technotopian discourses through a deconstruction and critique of this media text and by comparing it to other genres of techno/cyber-narratives. By mapping out the dominant political economic discourses that the Cooltown narrative works within, we can more easily identify those alternative narratives that open up future possibilities rather the closing down and limiting the range of future technologically mediated realities.

Mapping the Discourse

There are several issues to consider in trying to map the discursive terrain of this representation called "Cooltown." [2] Cooltown is a vision of the future – that which has not come to pass. But in many ways it does attempt to make a comment on reality/fact just as all representations do. Indeed, we can understand the difference between a representation and a signification as being that representations are signs that claim to represent reality: they make a claim of truth for how reality *is*. As a representation of the near future, Cooltown combines text and audiovisuals to make a statement of reality about how people will interact with technologies in ways that ensure "fiction-free" flows of consumption, capital, and labor.

I use the term technotopian throughout the paper to talk about narratives which adhere to an old progress myth, simply positing that new technologies will *a priori* benefit and improve society and the quality of life of all individuals with access. Coyne (2001) notes that narratives are vital in framing the range of possible concepts that individuals and societies can apply to think about and understand technology. Techno-narratives institute and privilege certain metaphors for *being* with technology (Hillis, 1999). With Internet technologies some of the most popular and powerful metaphors have been "virtual," "virtuality," "cyber," and "cyberspace." One way that the narratives that have created and imbued these metaphors, and others, with different meanings may influence the subjectivity of Internet users is by envisioning how Internet technologies enact a mode of existence that exceeds the placeness of the body.

Many narratives, such as the Cooltown website and video, offer visual representations and experiences that support and extend the realities that these metaphors have to offer. As I will continue to argue throughout this paper, the Cooltown video acts as a particularly powerful articulation of a vision of a technological future. It offers a glimpse into a world of becoming; not yet being but just as *real* to a certain extent as the current techno-reality on view in television advertisements, on the web, and practiced/experienced in a number of environments (the home/work terminal, via mobile devices, etc.) that are imbued with discourses of virtuality. Together the range of new technologies used and of techno-narratives consumed within a society and by an individual help to enframe both her beliefs and her being in regard to the nature of the real in both experiences of the present and possibilities for the future. [3] Thus, the character of the different and sometimes antagonistic technology narratives and discourses does matter in terms of what the possibilities for the future can be. At this juncture, this is particularly the case with mobile narratives (e.g. "cellular," "wireless," and "3G," narratives, especially with the trend towards the technological convergence of cellular/mobile and Net technologies) that have only emerged in mainstream channels of representation in the last few years. We can compare these to the somewhat older desktop computing and "Net" discourses where dominant narratives (such as Windows, "cyberspace,""virtual," portals, the web, and others) have emerged over alternatives that ten years ago (depending on the case) might have existed more-or-less on an equal discursive playing field.

To explore the discursive terrain of Cooltown, I first consider what it shares with (and how it is possibly different from) other technotopian futurisms. Within a discursive articulation, any representation may draw from "organic" discourses, established historical conceptions within a culture, in this case regarding how people conceptualize and understand technology. Many representations draw from organic discourses and from more current issues and motifs to produce a slightly new, conjunctural, articulation. Cooltown shares some of the same organic lines of discourse with technotopian narratives that surround such nineteenth century technologies as electricity, photography, and the telegraph. Looking at narratives of electricity in literature and at World Fair's from the 1880s to the 1940s, David Nye sees "technology to be part of an ongoing conversation between generations and between social groups over their differing conceptions of what is desirable, possible, or even real…These Narratives may focus on an older world…or they many engage the future, projecting utopian visions of ease and abundance" (1997, p. 3). Like Nye, Jody Berland also sees utopian hopes as having colonized narratives of technology. "If utopia has expired in the cultural imaginary," she argues, "this is only so that it may gather and condense in the narrative of techno-evolution, which seems to draw us irresistibly toward the holographic world of technological futures" (Berland, 2000, p. 236).

In its basic form the techno-evolutionary discourse is organic, articulating understandings of new technologies since the first industrial revolution as the central components in the evolutionary progression of humanity. Within specific cultural contexts techno-evolutionary narratives create or work within, conjunctural articulations of how a particular technology "will impact society" as was the case with the Internet being credited by scholars, politicians, and CEOs with freeing information and democratizing social relations. Since the late nineteenth century, many technotopian/techno-evolutionary discourses have been articulated in corporate narratives. As with Cooltown and other narratives, such as many seen in commercials for high-tech products, techno-evolutionary discourses are appropriated by corporations to help sell their products and identities while serving to naturalize the role of capital/consumption within collective conceptions of the appropriate uses, innovations, and futures of technology.

Like most technotopian futurisms, Cooltown does not stray from the progress myth of technology. However, in contrast to some technotopian/techno-evolutionary narratives, the world view offered in Cooltown never moves outside of or challenges the

hierarchical social relations of global capitalism. Most Cyberpunk [4] futurisms see the liberation of the mind from the body as allowing human consciousness to escape the prison of the body and the forces (such as capitalistic labor practices) which enslave subjectivity as long as it is chained to the body. This is a posthuman future, but as I will show, not the future of Cooltown. Interrogations of posthuman future narratives suggest that these dreams of jettisoning the body in favor of "pure consciousness" are deeply rooted in the modern human psyche of the liberal subject, in the simultaneous fear of and wish for death, and are thus revealed in cultural motifs of the sublime.

In *How We Became Posthuman*, (1999) Katherine Hayles attempts to rebuff the liberation philosophy of some of the more infamous spin doctors of disembodiment, like *Mondo 2000* magazine. She proposes an alternative embodied and egalitarian praxis of posthuman subjectivity. "If my nightmare is a culture inhabited by posthumans who regard their bodies as fashion accessories rather than the ground of being," she writes, "my dream is a version of the posthuman that embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality, that recognizes and celebrates finitude as a condition of human being, and that understands human life is embedded in a material world of great complexity, one on which we depend for our continued survival" (p. 5). Hayles techno-futurism is not utopian, but rather seeks to stay away from dogmatic guarantees in offering a vision based on alternative practices.

One futurism which tends toward the technotopian is Pierre Levy's (1997) notion of "collective intelligence." "This vision of the future," he writes, "is organized around two complimentary axes: the renewal of the social bond through our relation to knowledge and collective intelligence itself" (p. 11). Advanced information and communication technologies are the tools that will make collective intelligence possible according to Levy. In the process, capitalism and democratic politics as we know will seemingly become obsolete. Such "Hive Mind" futures, however, are also not the vision that Cooltown embodies. [5] In both of these technotopian futures, Levy's and those that Hayles critiques, liberation is a central theme or promise – liberation of the mind from the confines of the body (for Levy the body politic), freedom from physical limitations and geographies, and liberation from confining political economic governance of social organization.

Before moving on, it is worth noting that many mainstream texts that narrativized Internet-related technotopias emerged in the early 1990s within both academia and popular culture. To start, research of social interaction within text-based computer-mediated communication (CMC) — which actually began in the early 1980s — encouraged the development of popular narratives of human liberation from difference and hierarchical power-relations. [6] Inspired by CMC research and their own experiences in the 'online community' know as the WELL, [7] Internet gurus/left intellectuals like Howard Rheingold and John Perry Barlow marshaled the popular belief that Internet technologies could radically alter social and political relations for the better. Taking up the "cyber" vibe and revolutionary language of Rheingold, Barlow, and other popular and academic writers in the early and mid-1990s, computer and communications corporations sought to associate themselves and their products/services within the new cultural climate of the "digital revolution."

Analyzing television ad campaigns for IT giants like Microsoft and AT&T, Lisa Nakamura (1997) observes a particular utopian and liberatory vision of Internet technologies that acts "as a promoter of a radically democratic form of discourse." These ads work within the progress myth of techno-evolutionary discourses as articulated through the commercial commodification of representations that narrativize technological amelioration of social problems. A strong conjunctural move is made around the idea formulated in academic and popular theory and research of the Internet as offering great potential for individual empowerment and identity construction and thus working as an equalizing agent vis-à-vis power differentials based on ethnicity, gender, and sexuality. In fact, given the emancipatory elements found in the examples discussed so far, I want to suggest that one way we can understand the discursive move of many Net inspired technotopic narratives is as offering a particular brand of (neo)liberation theology. Technology has become not unlike a god in the sense that it is worshiped for its perceived emancipatory and ameliorating agency. This may seem ironic in that technology is also commonly held to be nothing more than the tools people create (perhaps partially due to the marginalization of strains of "technological deterministic" theories within media-related scholarship). Here it is not only "Man's" ability to create, but also "his" ability to steadily work toward the creation of the means for "his" own salvation from the world (i.e. an escape from death, immortality). While not being particularly utopian (I will provide arguments for this below), Cooltown retains some elements of techno-evolutionism in that it incorporates the Enlightenment's belief in the perfectibility of humanity. Through discourse capitalism itself, along with technology, has come to embody this trope of the Enlightenment (the progress of technology and the market/economy have replaced God and King: when the worldly powers of the economy fails, whether through market crises or ecological decay, technology will ["it must!"] be our savior).

The official volumes of History present a particular narrative where capitalism and democracy have been, and will continue to be, the uniting and liberating forces of humanity vis-à-vis despotism, poverty, injustice, disease, and even war (although democracy has also been increasingly invoked in rhetoric for the justification of war). Cooltown portrays the perfection of this global system where "citizenship" is regarded as the freedom to go wherever and do whatever one pleases, thus radically redefining notions of the public sphere, community values, and civil rights. It presents the salvation of the liberal subject from

the confines of these modern institutions: a global postmodern neo-enlightenment for the rich and powerful. And yet technology is also held to be the great social and economic leveler. If only it is applied correctly technology can bridge the digital divide, spurn urban renewal and entrepreneurship, solve global malnutrition, and empower the disenfranchised, thus giving rise to the sense that the utopian promise of heaven is possible here on earth (after all which one are we to put our hopes on: technology or politics?). In fact, democracy has in many ways taken on much of the discursive function of technology (perhaps as a plug-n-play device, batteries not included, but with lots of manuals to chose from), existing as a poster child for progress, market capitalism, and hope, while obscuring Foucauldian power relations from the local to the global. Liberation theology has been used to describe movements which apply the discourses and beliefs of religion to demand and fight for better living conditions and human rights. A theology of technology infused by the ideology of democracy similarly works toward and promises human liberation from uncertainly and the negative consequences of capitalism.

The Domestic Sphere Goes Global

By looking more closely at the Cooltown version of "Tomorrowland" and the ways in which this representation articulates the nature of human existence in an networked environment, I argue that unlike many technotopian narratives, Cooltown lacks strong utopic elements (mostly, as I will show later, by failing to acknowledge the existence of social problems). However, this narrative does appropriate discourses of what I call "Man in His Technological Environment" [8] and the trope of the American family, which are powerfully articulated through a conjunction with the information and labor demands of global capital. Cooltown adopts an organic strain of this discourse which revolves around the application of an array of technologies within everyday life. In particular, looking at the "long-boom" era of economic prosperity in the US during the 1950s and 1960s, one can consider conjunctural articulations of this discourse arranged within narratives that idealize progress and the domestic pleasures of technological innovation (in the form of the "latest" and "best" new technologies) within the domain of the American middle class home.

One of the best examples of this type of narrative is Disney World's "Carousel of Progress," which actually debuted at the 1964 World's Fair and was sponsored by General Electric. The Carousel, one of the only attractions that Walt Disney himself helped to design, embodied Disney's fascination with the marriage of progress and the American family. [9] The coming together of Disney's legacy of nostalgic entertainment achieved via his desire and skill in "improving" the past and celebrating technological futures (whether in cartoons or theme park rides) with the equally strong desire of corporate giants to sell themselves and their products can be analyzed as a case study of the creation of culture/experiences of culture and how specific discourses of technology and consumption — such as "Man in His Technological Environment" — are written in to these narratives of the past and the future. Wallace (1989) notes that while Disney was always trying to clean up messy and negative elements from the past, his histories evolved over the years from favoring patriotic and nationalistic themes to corporate friendly techno-narratives. "The Carousel of Progress," he writes, "is more than simply an extended commercial brake. It is a paean to Progress – defined as the availability of emancipatory consumer goods," thus serving to naturalize the role of big business as the caretakers and purveyors of the future (p. 39).

During the same time period, a similar narrative of consumer technologies in everyday life was offered in television advertisements (and earlier with radio) for home appliances that made "Mom's" work a little easier and "Dad's" and the whole families' entertainment possibilities that much more engaging, pleasurable, and centered around consuming media like the television. Both the trope and reality of the American middle class family were central features of the overall socioeconomic organizationalism of Fordism. The operational principles of Fordism which were being solidified in the first decades of the twentieth century — centralized/mass production and minimal raise in wages so that workers could become consumers — exacted a new relationship between capital and labor and thus new sociocultural formations of consumption. Like other new technologies, radio and television were eventually designed and marketed toward the domestic realm and became channels of consumption to the middle class home. Narratives of the technological homestead such as "The Carousal of Progress" did not question or challenge gendered power relations in the American home, but rather ensured the smooth flow of the labor requirements within the moral economy of the domestic sphere. [10] Mom is always able to get her work done using the latest technologies and can even enjoy the pleasures of network television with the rest of the family when she is done.

Cooltown works through this same organic discourse of technologies in the everyday sphere of action as "The Carousal of Progress." It employs the trope of the American family, but furthermore articulates it within a vision of dispersed technologies deployed in a world where everyday lives are operationalized within the global flows of capital. Cooltown technologies allow for productive labor-on-demand. The nodal points of the political economy are established throughout the complete realm of daily existence. Normalized gender relations have changed since the 1950s, but the status quo is never challenged by the technologies presented in the different versions of the Carousel or Cooltown technologies. Rather, these technologies allow for social relations to seemingly flow as well, ensuring that social breakdowns do not threaten the efficiency of labor or the transmission of information. It is here then, that we should ask of emerging dominant mobile narratives like Cooltown the

important question, where does the cultural desire for ubiquitous media/technology come from? (The easy answer is that it is a desire manufactured by ideological state apparatuses. However, it is much more complicated than that.) Considering the historical examples noted above, we may conclude that part of what we are witnessing is an expansion of a domestic sphere that has been so completely colonized by media over the last eighty years that its moral economies and media practices now dominate the totality of everyday life.

Figure 1. A screen shot of the first issue of *Mpulse*.

Ubiquitous Technology, Ubiquitous Labor

In 1999, HP announced "a new strategy designed for the Internet age" based on web connectivity and services. The company sought to position itself to "deliver" the web services, devices, and infrastructure (servers and software) aimed at achieving a future information and communication apparatus "where people, places and things are all connected to the Web." Cooltown was conceived as a concept around which to market this new project which was introduced at the 1999 Comdex exposition. This vision was further cultivated on the Cooltown website which was up in time for the expo. *Mpluse* was launched two years later and included feature articles and the videos as a method to expose a wider audience to Cooltown technologies. This is the opening paragraph from the first issue of *Mpulse* (June, 2001) (which is now paraphrased on the homepage of Cooltown.com).

> [Cooltown is] our vision of a technology future where people, places, and things are first class citizens of the connected world, wired and wireless - a place where e-services meet the physical world, where humans are mobile, devices and services are federated and context-aware, and everything has a Web presence. In Cooltown, technology transforms human experience from consumer lifestyles to business processes by enabling mobility. Cooltown is infused with the energy of the online world, and Web-based appliances and e-services give you what

you need when and where you need it for work, play, life.

Through the work done by HP Labs and independent developers since 1999, some prototype technologies have already been developed. [11] In fact, the company has built and opened "Cooltown demo centers" in Paramus, New Jersey; Geneva, Switzerland; Toronto, Canada; London, England; Rockville, Maryland; and most recently in Singapore. Thus, there really is "a place called Cooltown," albeit that these locations are explicitly designed to showcase HP technologies for high-end corporate customers. The mission of the demo centers is ultimately the same as for Cooltown.com and *Mpulse*: to bring the vision into the realm of a commercial reality. "Cooltown will provide our Canadian customers," lauded the Vice President of HP Canada when the Ontario demo center opened, "with a view into the future of mobility and inspire them to leverage technology to transform their businesses and stimulate future growth opportunities." While *Mpulse*, and the Cooltown videos, illustrate future technologies shown in "everyday" scenarios with users coded as middle class, as shown above HP clearly sees the need to cater to big business first and foremost as an important step towards the actualization of the Cooltown vision. Media critic Herbert Schiller noted almost thirty year ago that corporations have the most money to spend on new technologies and thus development processes favor their needs and values (Webster, 1995, p. 90). HP not only desires to sell Cooltown technologies to companies that may yearn for the capacity to enhance and manage labor and information flows, but also to corporations that can serve as partners, intermediaries, and investors to help bring Cooltown to middle-class neighborhoods and small businesses. Doug McGowan, general manager of HP Service Providers and Mobile Solutions Organization, articulates HP's double-sided new media equation that portrays utopic optimism for the total good of technology for all (who can afford it) on the one side, while stressing the need for big business to drive and shape what the technologies will be on the other. "Technology truly can transform the human experience and how we live our lives on the go,"McGowan writes. "With Cooltown, HP helps enterprises transform the way they operate and serve their customers."

The concept of liberating networked computing from the desk top and dispersing it into the lived environment did not spring forth from the minds of HP Labs, but is credited by most computing pundits to the Ubiquitous Computing program in the Computer Science Laboratory (CSL) of Xerox PARC. [12] This program was organized in early 1988 and was highly influenced by Marc Weiser whose mission for ubiquitous computing was to "actually redefining the entire relationship of humans, work, and technology for the post-PC era" (Weiser, Gold, Brown, 1999). Weiser's ideas in fact follow the work of earlier IT engineers/techno-philosophers Vannevar Bush and Douglas Engelbart. What Cooltown accomplishes is an appropriation of Weiser's ubiquitous computing into a Castellsian articulation of global capital/information/labor *flows*. Manuel Castells argues that out of a globalization of neo liberal political economics and the emergence of networked information and communication technologies a new mode of development, *informationism*, has begun to organize society around flows of information, capital, technology, and culture. Flows "are the expression of processes formulating our economic, political, and symbolic life…the material support of the dominant processes in our societies will be the ensemble of elements supporting such flows, making materially possible their articulation in simultaneous time" (2000, p. 442). The Cooltown video depicts several scenarios of everyday life within this Castellsian reality where new technologies bridge any possible fissure that might interrupt the smooth, "friction-free" flow of capital in the guise of information. In this completely networked environment labor becomes an abstracted commodity in the unbroken flow of capital (Robins and Webster, 2000).

Figure 2. Screen shot of car window in video. Also showing the voice mail player.

The most recent issue of *Mpulse* is always linked to the homepage of Cooltown.com. On the homepage, one of the first options for visitors is to "View the Cooltown videos." Three videos have been available since 2001. Two, "cooltown rocks," and "the digital conversation," are build on aspects of the commercial narratives promoted in "cooltown," the original video, which

accompanied the first issue of *Mpulse* and Cooltown's inauguration as a website. [13] The introduction of the original "cooltown" video lauds the ability of Cooltown technologies to be there "wherever" and especially "whenever you need them." This phrase serves as a transition into the first scenario depicting Cooltown technologies at work. A Caucasian man in a business suit is driving a mini-van. The vehicle looks like a number of different models of cars that could be bought today. The first thing that the driver says, however, is "play voice mail." One momentary viewing position that the video offers is from the front hood of the car looking though the windshield at the driver. We can see that there are visual displays that appear near the bottom middle of the windshield. The display is associated with a voicemail system, and although the driver interacts with the display through voice commands – deleting the first few messages – his eyes frequently glance at the display. The first message is perhaps from a friend: "Hey, this is Dave." But the driver quickly interrupts, "Stop. Delete." The text here references the common practice of screening phone calls to avoid unwanted conversations. This reference helps viewers to identify with the driver and also serves as a joke/funny moment which furthers viewer's investment in the text. After deleting another message, the third informs the driver that his meeting today at four has been moved up to noon. At this point the car's voice interrupts to give an alert: "warning, breakdown imminent, Car Track recommends immediate service." The video pans to a view of the mini-van moving down a country road with a cow pasture in the background (thus cultivating a feeling of isolation from help..the car is in the middle of nowhere). "Oh no. My meeting!" the driver exclaims. But in this moment of panic the mini-van's calming male voice has a solution: "To locate the nearest service station turn right…" The sound track of the video begins to pick up, and soon the car arrives at a service station. An attendant meets the mini-van, and knows the driver's name: "Hi, Terry Carleson? Car Track alerted us that you were on your way." We also learn that Car Track has called a taxi so that Terry can make his noon meeting. Seemingly surprised by the efficiency and ease of Cooltown technologies, Terry can't resist the urge to test the boundaries of their geniesque capabilities by asking (almost as if to the air), "I guess all I need now is a Million dollars." After a pause, when the money does not appear out of the ether, he quips to the cheery mechanic: "Can't blame a guy for trying, right?" [14]

Obviously, one thing that Cooltown technologies do not threaten is capitalistic systems of exchange. In fact, they are designed to facilitate up-to-the-minute-demands that capital makes of labor. For example in the second scenario, a saleswoman goes over last-minute preparations for a pending presentation with a colleague (back at the office) over a cell-phone-like device. Her colleague is making the final touches to their presentation. The saleswomen sees a SUV parked outside: "Hey Marcy, won't a Lincoln Navigator make a great symbol for the demographic?" She then points her device at the car causing a picture of a Navigator to pop up onto its screen. From detailed descriptions on Cooltown.com regarding the base concepts of Cooltown technologies, we can deduce that the device was able to communicate with the car to find its URL (which is sent to Marcy to make the winning changes to the presentation). The Lincoln Navigator is equipped with a "Beacon," a device that broadcasts, within a short range, a "Reference" (often just a URL). The saleswoman is holding a "PAD" ("portable or desktop based access device), that along with other capabilities associated with this specific device (e.g. voice, email, pager, WAP web browser, etc.) contains a "Taggy." A Taggy is a combination of hardware and software that manages all the References encountered in a given area (it can also transmit a Reference). The saleswoman thus chooses from a list of References found via her Taggy software and was able to retrieve and accessed the Navigator's URL (of the corporate or owner's website??) to retrieve an image of the vehicle. "I'm sending you the URL right now. Yeah, well sometimes you just get lucky," the saleswomen says, while we all know that this moment of success in the cutthroat sales business is due to the power of Cooltown technologies, not luck. She then walks into the presentation room passing a competing sales team on the way out. "Mr. Caruthers and Mr. Brown" carry a poster-board chart, lacking the saleswoman's sophisticated gadgetry. After seeing that she is competing with analogue, not digital, technology, the businesswoman talks to her colleague one last time. "Hey listen, Marcy, I've got to go I'm here. I'll call you after to tell you how the presentation goes. And one more thing [she pauses, looking back in the direction of Mr. Caruthers and Mr. Brown], don't worry." With her cell phone-like device she "beams" the presentation onto a flat desktop monitor as well as onto a large windowed wall which is the backdrop for the presentation room. She does not even pause to shake hands. "You all know me, so let's move right into the presentation."

There are several aspects of this character which signify the referent of this text, the specific Cooltown technologies that are depicted. To be sure, this person exudes incredible confidence. Her behavior and style of speech are swift and efficient. She seems to revel in the excitement of a fast-paced lifestyle, but can get down to business in a moments notice. Her confidence, efficiency, and killer attitude reflects back on the phone as if to say: if you had Cooltown technologies you'd be as bad ass as her! In the first scene the technologies act the role of a Border Collie, herding the disoriented Terry Carleson back on track as not to be late for his meeting. Thus the sheep dog technologies are seemingly working more on behalf of the shepard, his company, than for him. Yet, the businesswoman character of the second scene is presented more as an active liberal subject. She is her own agent, and this agency is either granted or extended by Cooltown technologies. But we really don't know which is the case due to the limited narrative offered in this text. Together human and machine form a productive unit that cannot be stilled (she is continually talking, moving, or doing something active throughout the scene). At the end of the scene, we see the empty space of the large windowed wall which can be read as representing the wide open possibilities of the future. This empty space is quickly filled, however, with information by the businesswoman and her technology. The journey— which started with her entrance into the building — is now over. We have arrived at the future of the fully operational Cooltown version of the

information society; the lived world and its future are now inundated with media and smart machines.

In depicting a near future where the business and social relations, people, clothes, and vehicles are not much different than exist today, but limited to certain scenes of reality (deploying practice often used in science fiction narratives), Cooltown does not threaten existing hierarchies but rather inscribes them back into the future. People are still theoretically equal, but with the latest gadgets, some are more equal than others. [15] It is a reality where social and economic relations fail to change. New technologies just make them more efficient. As Robins and Webster argue, "a major achievement of the capitalist imaginary has been the colonization of the future – and that means the colonization of possibility" (2000, p. 235). Narratives like Cooltown seek to close down the uncertainty prevalent in a world that hinges its welfare on the stability of unstable systems of economies. From Robins and Webster's perspective, the proliferation of such narratives in multifarious cultural spaces achieves a "capitalist enclosure of the future" (p. 235). For these theorists, even those technotopian futurisms that predict social equality or collective intelligence as outcomes of global communication and information networks are complicit to the capitalist political economy that controls the direction and uses of technologies thus insuring their application to continue and further a global capitalism/democratic regime/empire. From this point of view, such narratives are only diversions, fantasies which obscure this dominance and the lack of any real alternatives to it. Cooltown, however, fully embraces the dominant ideology. If it is utopian at all, it is the ultimate perfection of capitalism. Commodities, labor, and capital flow without impediment and social flows follow along (at least for the "First Class). New information and communication technologies are conceptualized as liberating societies and economies from breakdowns and confusion.

The Cooltown vision of the world is one where accidents do happen; everyone seeks to be a winner, but inevitably there are losers. The dog-eats-dog world of capitalism is normalized, and the top dogs have the latest "Killer Apps." Cooltown technologies become tools for succeeding and surviving in the frontier of global capitalism. Those who want to be in the global First Class need First Class technologies. Our saleswoman is a competent liberal subject, a flow. Although as a fully active subject she only has agency as a flow within the network. Her cell phone device brings her into the global information network and allows for her a range of action within it. Together the device and the individual as the unit of labor become a node in the network. The competition, in this case the older Mr. Caruthers and Mr. Brown with their poster-stand graphics, are literally out of the digital loop. Being part of the network is not only necessary for financial survival, but as we see in another clip, the First Class Citizens of Cooltown are also connected to life saving technologies. [16] The Cooltown video only display the technologies available to the digital "First-Class." But we may assume that there is really more than one district in Cooltown, and thus a hierarchy of devices and classes as exists today in terms of people's access to technology. Living outside the boundaries of town (i.e. not having access to Network technologies) means being shut out from many social, political, economic, and cultural spheres and services. Thus you are damned if you don't become part of the Network — to whatever extent you have a choice — but as discussed later, you are also damned to a life limited to/consisting of what the Network has to offer if you are a node within the flow.

While being designed to foster individual success in the cutthroat competition of global capitalism, Cooltown technologies can also serve to Band-Aid the lack of human interaction that is a consequence of individuals becoming a cog in the information/industrial machine. For example, a short narration introduces one scenario with, "Cooltown brings the cyber and real world together in useful and fun ways." What this sentence suggests is that the "cyber world" and "real world" are to some extent still separate, implying that the real world maintains precedent and control over information technologies. However, the content of this scene seems to say otherwise. At the beginning of this section of the movie, we see an African-American office worker press his thumb to a scanner at the front entrance of an office building. From a view inside the building, we see his thumb against the scanner. A digital readout (of encoded symbols) appears, seemingly representing his identity being verified by the security system. This visual offers an immediate contradiction: while the rest of the scene is constantly trying to stress this character's humanness, we already can see that as far as the system is concerned he is just another bit of data being put to work. Once he is recognized, the door pronounces, "Congratulations, Bob, and welcome! You are the winner of the illustrious service award!" The reaction on his face tells us that Bob is happy about the news. Next he is congratulated by the the drink machine which also knows what his preferred drink is. For its part the office printer AI (Artificial Intelligence) offers even more praise, "Congratulations, Bob. You are my favorite human." Bob is bubbling with pride by the time he gets to his cubical. He greets his computer, and it also offers congratulations. It is interesting to note that all of the AIs that talk to Bob have the same steady, male voice, as if there is only one AI for the whole building with only one voice and personality. It is hard not to read this as a reference to the Hal 9000 computer/AI from *2001: A Space Odyssey* (1968). Hal has become an infamous pop culture icon for its monotone voice and its rebellion against the crew of the space ship that it controls. One might assume that any similarities between the voice of Cooltown's computers and Hal would be avoided at all costs by the producers of "cooltown" the movie (it is either unintentional or a startling, subversive joke). Yet it seems appropriate that what could be the voice of the global network itself is in constant contact with the information worker whose productivity is essential to the Network's maintenance and survival. What we see then is perhaps a symbiotic relationship, because the network/apparatus provides info workers with companionship, kudos, technical advice, alerts of different kind, entertaining media and communication options, and ultimately lifestyle maintenance (e.g. through the ubiquitous technologies shown here, but also via mobile devices that cater to individual

needs; e.g. advanced cell phones and PDAs) and a livelihood.

In this scene we see what is clearly an overworked, and usually overlooked, employee who needs a little attention to make him feel special, and Cooltown technologies are up to the task. Soon after sitting down, Bob gets a video call on his PC. It is his wife: "Congratulations, Bob," she says. "You forgot to take out the garbage today. Again." Here a long-running sitcom joke of middle class heterosexual domesticity plays out. The typical male satisfaction with his menial accomplishment is shattered by his inability to accomplish even the most simplistic of household chores. Apparently, Cooltown technologies do not take out the garbage. Neither do they alter patterns of the socialization of gender roles. Dominant discourses and social roles are free to perpetual themselves through the network, lest any obstruction of flows leads to a crisis in the tight-knit and highly supervised socio-political-economic system. Recognizing the demands that capital places on labor, such as long hours in relative human isolation, Cooltown raises human-computer interaction to the level of fraternization. Although the theory that people treat computers as if they were human has not yet encouraged the creation a great number of machines that treat people like humans, it is possible that children raised with such interactive machines might be socialized to be able to have emotional relationships with them (thus begging the question: who programs these machines, for what purposes, and according to what assumptions/ideologies?). [17] [18]

While Bob's camaraderie with office machines programmed to kiss-ass is offered as a "fun" and perhaps intentionally seemingly ridiculous application of Cooltown technologies, there are significant implications for people being not only functionally but also cognitively and socially interpolated into networked machines. Lastly, it can be read as significant that the character of Bob (who is depicted as happily integrated within the technologies) is African-American. Bob seemingly displays less agency than the other citizens of Cooltown that we get to meet: he encounters and uses technology in the most mundane circumstances such as opening a door, getting a soft drink, and using the printer (as opposed to the saleswoman, or a girl learning Spanish in another scene in the video). Bob can thus been seen as fulfilling the role of the Sambo or Uncle Tom (not unlike the African-American doctor in *The Simpsons*, who was intentionally created to reference the jolly, upper-middle class African-American "representatives" in network television, Bill Cosby, Al Roker, etc.). Although in a rewrite of the video's script this character could have been white, the articulation of race here (which seemingly draws on specific stereotypes) makes it easier perhaps for Bob to be the dupe, totally inscribed as the object of techno-discourse. Ultimately he might signify the ideal subject in this narrative where labor and technology together compromise a *techne,* [19] a way of being in the world, which in this case is operationalized by the demands of the total but dispersed power of capital. Although Terry Carleson is similarly portrayed as being overwhelmed by the technology, he also functions as a stand-in for the viewer who is positioned through Terry as being amazed by the magic of new technology that he experiences. The businesswoman, on the other hand, is empowered. Her character is positioned as someone for the viewing subject (the momentary subjectivity of the viewers of this move) to want to be like due to her confidence, success, and competent wielding of mobile technology (current hardware is not always so easy or pleasant to use). The character of Bob is constructed to fulfill a third roll juxtaposed from these first two. To a certain extent regardless of race, Bob's mundane and everyday existence within a world engulfed by intelligent and ubiquitous technologies represents the typical subject of the future world envisioned by Cooltown and other dominant technotopias offered in many commercial representations. He is totally interpellated by the ideology, architectures of power, and physical elements of the apparatus of techno-capital. Thus, within the overall narrative progression of "cooltown" the movie, the viewing subject is taken from identification with the amazed Terry Carleson, to the empowered businesswoman, and finally arrives at the end to Bob's subject position which, ironically, perhaps most accurately articulates how human agency might indeed be limited and dissipated (as opposed to enhanced as Cooltown wants us to believe) within the consuming network apparatus of the Cooltown world view.

Figure 3. "Congratulations, Bob. You forgot to take out the trash. Again."

Enclosing the Body, Engulfing the Subject: Recipes for Cooltown Subjectivity

Cooltown articulates a particular vision where "people, places, and things" are functionally joined into the global space of flows. The unit of labor becomes difficult to identify: it is the businessman and his AI car, the saleswoman and her cell phone device, Bob with his desktop PC and AI friends. The cyborg unit of labor ensures that the job gets done on time, but also keeps human factors from becoming breaches in the flow of capital and consumption. One important function of Cooltown technologies in managing the flow is to act as control technologies. They ensure the organization of bodies and actions according to systems of time, space, and the necessary exchange of information. This is the "timeless time" of Castells networked society. From a Foucauldian perspective, power is produced in the network as bodies are disciplined to the daily tasks, technologies (both hardware and software), and geographies of capital; a knowledge of bodies and subjects is also produced in these architectures of life flows. In Cooltown, everyone and everything has its own URL for identification. Wherever Bob is within the office building his whereabouts are known, a fact that he is distinctly aware of and to which he is accustomed. Waking life under the gaze of information machines is normalized. Each individual's information is not only inscribed within the devices in and around her/his physical location but like every bit of data becomes dispersed within the network to be utilized for potentially constant control and for surveillance of each citizen's labor and behavior (Barney, 2000, p. 101). Networked information technologies allow for the "control requirements" of all socioeconomic processes in global capitalism, ensuring that the flow goes on.

The Cooltown world relies on Bob not only for his highly disciplined labor, but also requires him to simultaneously fulfill the roll of consumer. Thus, wherever Bob goes customized services can access his URL to cater to his most detailed tastes. He is doubly articulated, flowing both ways as on-demand laborer and consumer. The character of Bob's tastes are furthermore supplied by the audiovisual flows of the network: "networked computers have emerged as a crucial instrument in maintaining control over the complex demands and outputs of an increasingly system-saturated existence" (Barney, 2000, p. 103). As Barney notes here, the universal "Bob" as a flow constructed ontologically within the boundaries of cyberspace seemingly "gets it" at both ends: subjectively and physically skewered by the ubiquitous machine. With human agency limited within a nodal network which ascribes the body solely to the functions of labor and consumption we see again the enclosure of possibilities for the future. It might not be far from the truth to argue that in Cooltown there is no future, no room for political difference or subjective activity outside of the network.

Cooltown subjectivity implies daily experiences that never exit the ubiquitous technologically mediated environment. The Cooltown apparatus is foregrounded by the audiovisual and interactive hardware that offers each citizen access at any moment, such as cell phone/PDA devices, Internet terminal/PC, and wired vehicles. Several scholars have worked to specifically describe how Internet technologies, as screen-centered media forms, impact subjectivity. In *The Language of New Media* (2001), Lev Manovich observes how the dispersed and variable cultural objects [20] of cyberspace combined with web and windows interfaces accessed through computer terminals compromise the total apparatus of new media through which the subject traverses. Poster (1999) agrees with Manovich that one thing that Internet technologies do that is *new* is to insert "the modern/late modern subject into a machine apparatus that is networked" (p. 15). However, while the networked nature and other aspects of Internet technologies connote new subject effects, the Internet terminal also remediates traits of older screen-based media. Along with other scholars of visual cultural technologies, both Manovich and Poster understand "the screen" as a particular apparatus of modern vision. The viewer's relation with the screen is ontological: mediating the subject's provisional/moment to moment negotiation of the symbolic and the imaginary.

Experiments with photography and film in the mid to late nineteenth century were all based on an understanding of human vision and experience that was profoundly influenced by the camera obscura. [21] These visual technologies were designed from a knowledge of humans as, experientially and cognitively, largely a visual species. In their privileging of the visual field and their positioning of the viewer as an observer these devices helped to initiate "the gaze" as a modern practice of vision. Considering how Virtual Reality technologies similarly alter user's subject positions, Hillis observes that, "because of its lengthier history, and its being made a metaphor for different, even oppositional, theories of subjectivity, the camera obscura suggests ways in which VR extends and disrupts metaphors of light and vision, and relationships among viewer, subject, user, and machine" (p. 32). For Hillis, technologies such as Virtual Reality privilege and engender specific experiences that lend themselves to being colonized by some discourses over others. Subjectivity is transformed through engagement with different media apparatuses within the specific contexts of experience from moment to moment.

I have made the argument thus far that in the narrative of Cooltown, a future of nodal subjectivity is constructed; bodies and subjects are ascribed within networked, flow realities. The screen is still one of the central points of access to the media/flow apparatus. In this environment of ubiquitous communication there are multiple points where screens, input devices, sensors, and

thinking machines encounter and discipline the body/subject. The screen as an operational mode of vision, and subjectivity is engulfed within the space of flows of dispersed information technologies. In fact, in Cooltown the qualitative differences between the wide range of experiences possible within the different geographies of distinct places are superseded by the set range of agency offered to any being within the network. In other words, the subjectivities of the First Class Citizens of Cooltown are determined more so by the possibilities offered within the ubiquitous flow of the network as opposed to the unique contexts of the places they might *be* at any given moment. It is very doubtful that the complete gamut of human experiences of the world will be available in the network flow since not all experiences and meanings can be commodified or articulated to labor. Thus, the citizens of Cooltown have seemingly less agency and ontological possibilities since their daily lives are limited to the technological boundaries and capabilities of the network and its devices. Indeed, the universal subject of Cooltown, which the video presents as an active liberal subject, is revealed to be a sheep in wolves clothing, with a postmodern subject engulfed within the mediascape and complete capitalism hiding beneath the surface.

The joining of human and machine in this narrative is one of a quasi Borg reality that attempts to masquerade as a cyborg. Cyborgs are theorized by Donna Haraway and others as individuals who merge with nature and/or technology, negotiating within hybrid identities and more empowering subjectivities. Thus cyborgs appropriate technologies, navigating social and cultural spaces to meet the needs and desires of the individual, not of capital. "If the concept of cyborg has two faces," Herman and Sloop observe, "one is Haraway's, in which differences exist but in a perpetual state of transition, radical, but unstoppable, open to various meanings, never translatable into a single code…The other face would be perhaps that of *Star Trek's* original Borg, a creation with such a radical sense of difference from romantic individualism that, as Katrina Boyd (1995) argues, it had to be transformed into a collection of romantic individuals manipulated by a single villain as the series, and eventually the film, carried it forward" (2000, p. 86-7). The citizens of Cooltown seem to have access to a diversity of signs with which to create identity, but any kind of true *resistance* that tries to transcend or usurp the network *is futile*. On *Star Trek*, once an individual was assimilated into the Borg collective — by being physically penetrated by the trademark metallic head gear and eyepiece — there was no way out. The merger was complete for both the body and the mind, as it is in the networked lifespace of Cooltown. However, the Borg reality of this representation is not visible on its surface. Indeed, Cooltown is able to project romantic notions of play and adventure, "man's" ability to produce enlightening and pleasurable devices. This world is not presented as a boring place to be, but rather exciting, new, and never dull. New technologies ensure that we are always engaged, entertained, and never alone.

Bricolage has never been easier for the liberal subject. Culture is engaged, appropriated, and rearticulated as modular and digital objects available for consumption in any number of ways. Thus, the preferred reading projected is that of the cyborg, as an active agent who knows how to use the technology and will do so as needed. In contrast, the Borg reality of Cooltown exists deep within the networked/technological architectures that permeate everyday existence. It is less a transmission of false consciousness, or a mediated and singular fascist ontology as on *Star Trek*, but instead revolves around the double articulation and interpellation of the subject as a flow. The individual/flow functions as both the unit of labor and consumption within the overarching system of global capitalism. Marx noted that capitalism relies on workers for their body/bio power. Without this power, capitalism cannot function. He also recognized that capitalism needs to have workers to consume most of the commodities produced. Many scholars and intellectuals have lamented the ability of network technologies to extend the domain of work to "anytime, anyplace." But these technologies have also created new cultural spaces that are quickly colonized by commercial representations competing for the subject's attention and the individual's cash. Net technologies did not start out as conducive to such consumption (many technologies were developed in the university, and interaction was mostly limited to text-based communities of interest). But as David Tetzlaff posits, the advent of a visual "web" made consumption practices learned from television easier to exploit. "The Web has actually pulled Internet use away from the interactivity of the Net's old text-based forms toward a more visual, individual form that better articulates with the TV-dominated culture of the Society of Spectacle," he writes. "This movement directly correlates to the Web becoming a safe home for capital" (2000, p. 102). The ubiquitous flow thus becomes the vehicle not only for information workers to be constantly connected, but also allows commercial interests to continually barrage people with customized media and lifestyle commodities (not unlike the Borg's physical and mental attachment to their collective technological apparatus).

In Cooltown, it is not just the technologies that allow for the smooth passage and functioning of capitalism, but the juncture of the flesh and machine to form the vital nodes of network agency. The *Matrix* (1999) can here be understood as a metaphor for the articulation of the collective of human nodes as the giant engine off of which the planetary system of global capitalism runs. We don't necessarily need to understand individual consciousness as being a constant hallucination however, as the film suggests. Instead, we can view this narrative as understanding how people are increasingly enframed within a technological reality discursively, politically, and economically rooted to global capitalism and informationalism as an organizing force. This rootedness is then the opposite of what Heidegger seeks for humanity in maintaining a rootedness to the natural world. Cooltown technologies work exactly against the randomness and surprises contingent to the world. They maintain a psychic, physical, and discursive, but still false, sense of order and control. Their domain of influence thus only holds within the space of flows of the network. By interpellating Cooltown citizens within their discursive and physical geography, Cooltown

technologies obscure the embodied sense of place that Barney, Hayles, Heidegger, Hillis, and Robins and Webster, among others, want to reaffirm and rediscover as an alternative and rooted praxis vis-à-vis techno-evolutionary and more importantly, I think, bleak narratives like Cooltown.

Conclusion

Although Weiser's dream of replacing the desktop PC may not come true in the near future, dispersed computing is extending the Net far beyond the PC's domain: the home and work offices. The colonization of lived spaces by the Net poses many challenges for how we think about the role of the Internet and other technologies in everyday life. Cooltown is only one way to think about the present and future of the wired and wireless world, albeit that HP's vision can be seen as emblematic of the dominant discourse/ruling ideology of global capitalism's modern appropriation of the development, promotion, and distribution of new technologies. I acknowledge, however, that the recent commercial narratives of "mobility" are only part of a longer history. The mobilization promoted by Cooltown flows from an already latent sense of identity detached from place and which has been encouraged through mass mediated practices for several generations. Each generation cultivates a variety of narratives (based on a variety of motives) to make meaning of the new technologies of their times. One casualty of the new mobility may be how society conceptualizes "cyberspace" as a place of escape, disembodiment, and postmodern subjectivity. If everyplace is now (or soon to be) part of cyberspace, cyberspace as concept around which many alternative and utopic narratives regarding being with technology have been propagated may lose much of its discursive power for describing a place of escape from the architectures of power and discipline that the body is subjected to (e.g. visual surveillance, discrimination and violence based on physical markers of difference, and the violence and labor practices of capitalism). If "mobility" has replaced cyberspace, it may mark a change in discourse where, for example, Microsoft can no longer laud how the Net is erasing racial distinctions, but Nokia can suggest that a customized face-plate on your mobile phone represents the unique aspects of your personality.

In HP Labs (and other software and hardware laboratories), engineers are actively developing technologies for ubiquitous computing and networking. Many such products — for example handheld wireless computers, gadgets that employ global positioning devices, and Wi-Fi networking — are already on the high-tech market. This movement towards dispersed/mobile technologies does signify changes in the media apparatus which need to be analyzed in terms of the new subject and cultural effects that this implies. The narrative of Cooltown is a fragmented vision, yet indeed also an archetype representing many of the dominant mobile/wireless narratives produced globally by transnational telecom/computing corporations (e.g. ad campaigns for the latest "3G" Net enabled cell phones and PDAs). It is only utopian in that it offers this kind of singular vision in a positive light, seeking to normalize the assumptions and practices of Cooltown in discourse so that as similar technologies are introduced they will be quickly accepted, applied, and assimilated. Of course even though some of these products will be dispersed and available for the networked executive class, the ways in which they are understood and thought of are still in the process of being worked out in various techno-narratives. As opposed to the Cooltown universe, in the real world appropriation of and different resistances to/within networked technologies can take place outside of, or in antagonism with, the dominant flow of discourse. In this paper, I have tried to describe some of the negative consequences and assumptions of Cooltown's unitary and futureless vision. It is vital that alternative scholarly and popular narratives create visions that open up and diversify the possibilities for the use of technologies in the future rather than closing such possibilities down.

One of the more mainstream narratives that portrays the potential negative consequences of unfettered ubiquitous media is the feature film *Minority Report* (2002). This vision is vivid and detailed enough to petrify privacy advocates and make advertising gurus drool (through the depiction of surveillance technologies that recognize individuals, allowing customized ads to pop up in the air in front of you as you walk in "public" places). But what about the reaction of the mass audience? Do most of the people who watch this movie come away concerned about how advanced media technologies were deployed in this fictitious world? Or perhaps they can't wait to live in that techno-reality (to be sure, the first goal of the movie is to entertain via urban chase scenes and plot-twists, not to question the technologies depicted). In the new techno-liberation theology, specific ideologies of technology and capitalism are normalized into dominant discourses via narratives such as Cooltown, ascribing alternative narratives that envision more egalitarian possibilities (through technotopian futurisms or initiatives for applying appropriate technologies into development projects) to obscurity or to the realm of the unrealistic. Perhaps an even greater danger is the extent to which these commercial texts normalize specific new media technologies, their users and uses, as part of the techno-evelutionary discourse; thus omitting such technologies from "reasonable" lines of questioning, concern, and criticism. Certain readings and discussions of the technological elements of *Minority Report* then — which are clearly coded as potentially distopic, or at least seem to soliciting questions about how these technologies are used and why — might be partially closed down by the emerging dominant discourses of mobility. Attempts to map the discursive terrain of contemporary new media narratives (whether they represent emerging commercial mobile technologies or visions of the future) thus become exceedingly important. Such inquiries can help us to consider the subjective realities that these futures entail from which informed judgments can be made regarding if we as individuals and societies wish to one day live in places like, or hopefully unlike, Cooltown.

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[1] As a guide for discursive analysis of visual texts I utilized Rose (2001). Qualitative visual analysis inevitably requires the researcher to interpret media texts based on extensive background knowledge and a deconstruction of the text. When trying to explore the discursive orientation of a text, "the object is always to detect paradoxes within the material…the problem is that those will not always become evident all by themselves" (Alasuutari, 1995, p. 134). With the task of detection and deconstruction in mind, the identification of (1) key terms (how they are used and how they may change), and (2) inter- and intra-texual/cultural references (e.g. What references are made to other discourses and specific texts, particularly popular culture texts?) are important considerations. For this study I draw extensively on critical theoretical work, particularly political economic considerations of the Internet and other new media technologies, to inform my analysis/critique of the assumptions and world view presented in the Cooltown video.

[2] I define a discursive terrain as the totality of discourses (cultural motifs, biases, ideologies, practices, etc.) written into, connoted, and associated with a narrative/media text or series of such representations. In attempting to define discourse, Gillian Rose (2001) writes that, "[i]t refers to groups of statements which structure the way a thing is thought, and the way we act on the basis of that thinking. In other words, discourse is a particular knowledge about the word which shapes how the world is understood and how things are done in it" (p. 137). Macdonald notes that, "any discourse concerns itself with certain objects at the expense of others" (1986, p.3). Discourses are in constant antagonism with each other, positioning for the ability to give meaning vis-à-vis oppositional meanings. In a discursive move, "language takes on meaning and discourses are constructed through struggles." Words also change meaning according to shifting positions of struggle depending on how, where, and by who they are used (1986, p. 47). In her widely acclaimed book, Theories of Discourse (1986), Macdonald traces scholarly concepts of discourse from the present concern with the contestation between dominant and alternative discourses to the early

20th Century theories of meaning, such as structuralism, and the theorists who contributed most to our modern understandings of discourse, such as Althusser and Foucault. Althusser's critique of Marx led him to theorize on the role of ideology in the reproduction of dominant social structures. Foucault's project, on the other hand, involved investigating the emergence of certain ideas and practices in history in order to explore how subjects are produced and disciplined within discursive regimes (which consist of clusters of social practices and knowledge). Some scholars use the term, "discourse," to refer to all forms of human dialogue (oral, rhetorical, media texts), but for Althusser and Foucault discourse must be understood as intimately connected to and affected by the institutions of society.

[3] The concept of enframing is here used in two ways. First, narratives help to frame how we think about different issues such as technology. This occurs both in terms of socialization and also in terms of agenda setting – deciding the types of issues and range of what can be considered with regard to certain issues. The second use of enframing is from Heidegger's theorization of how technology influences *being in the world*: particularly how we experience and relate to Nature (Barney, 2000, p.43). For Heidegger, part of the essence of human being is our rootedness in Nature, in the native soil. Modern technology alienates people by changing their relationship with the world to one of appropriation and consumption (Barney, 2000, p.43). The close contemporary engagement with new technologies thus implies a qualitative change in the nature of being through the joint mediation of techno-narratives and ontology within the apparatus. Subjectivity and our ways of knowing in the world are thus enframed within the networked media apparatus.

[4] Cyberpunk has generally been used to describe a genre of science fiction literature. Technological futures are always the setting of these narratives. Many cyberpunk narratives wrestle with conflicting distopic verses utopic themes: the destructive power of human kind and its technology vis-à-vis the liberatory promise of technology.

[5] "Hive Mind" is one of Wired Magazine Kevin Kelly's (1995) theories that mirror's Levy in some respects. Kelly argues that information and communication technology fuse the categories of nature and human society. Best and Kellner (2000) argue that Kelly "illicitly collapses technology and the economy into nature, using nature metaphors to legitimate the new forms of economy and organization…and fails to explore the consequences of the new organization of economy and new technology for the environment and society."

[6] Siegel's (Siegle et al., 1986) research comparing CMC groups and face-to-face groups, found that: (1) social equalization was higher in CMC groups; (2) group members participated more equally in discussions regardless of social demographics; and (3) that individuals were more uninhibited in CMC. Later CMC scholarship however offered a less cheery picture. In their inquiry into the socialization process in CMC, Lea and Spears (1994) question the body of evidence emerging from social psychological studies that suggest that CMC can serve to reduce some of the cultural and social barriers to communication, such as status differentials, resulting in greater equality of participation. Their research, attempts to show that CMC can serve to both reduce and reinforce power relations. Stressing the permanence of social factors, they posit that identity and interaction in CMC are grounded in the realities of identities, social relations, and cultural contexts beyond CMC, which pervade our social lives. Several feminist scholars have expanded on this observation. Susan Herring (1994), for example, has noted that, "women and men have recognizably different styles in posting to the Internet, contrary to the claim that CMC neutralizes distinctions of gender; and second, that women and men have different communicative ethics -- that is, they value different kinds of on-line interactions as appropriate and desirable."

[7] The acronym WELL is short for "Whole Earth `Lectronic Link." The WELL started in 1985 and offers combination of Internet technologies aimed at supporting online communities of interest. For more information on the WELL go to: http://www.thewell.org/aboutwell.html. Rheingold's popular book *The Virtual Community* (1993), (online at http://www.rheingold.com/vc/book) recounts his experiences on the WELL and his optimism for the social revolution that Computer-Mediated Communication has initiated. John Perry Barlow, a popular lyricist for the Grateful Dead, was an early user of the WELL. He co-founded the Electronic Freedom Foundation, a leading advocacy organization for the civil liberties of Internet users (http://www.eff.org/), and is the author of numerous essays on the social implications of Internet technologies. An online essay by Barlow, "Is There a There in Cyberspace" is available on the Web (http://www.eff.org/Publications/John_Perry_Barlow/HTML/utne_community.html).

[8] I use "Man" here because many narratives articulated within this discourse do not present women as active, technology-using agents.

[9] See the full-length article I have written on the development of the Carousel for the 1964 New York World's Fair. Visitors to the Carousel of Progress are seated in a theater-like auditorium. There are four or five segments to the show, each depicting a view in the life of an American family and their relationship/use of new technologies from the turn of the century (1900) to the 1990s (the characters age remarkably well!). The show utilized animatronics characters, which was a very new technology in the

early 1960s and was used in several other Disney attractions like the Hall of Presidents. The Carousel was refurbished many times, twice in the 1990s, but ironically could not compete with the attraction of newer technologies in the park, and was recently closed for a year to be refurbished and modernized. It opened again in late 2002. A low-quality video of one segment of the show can be viewed at: http://www.intercot.com/magickingdom/newtomorrowland/carouselofprogress/default.asp Also see Addison (2000) for more information.

[10] Weiner (1997) provides a systematic and in depth analysis of the Carousel by analyzing four different scripts from the history of the exhibit from the 1964 Fair, Disneyland, and Disney World. She finds that the character of "Mother" particularly illustrates how gender roles and stereotypes are played out in the show. Inevitably social change never seems to improve mother's life as much as technological innovations promise to. "Feminist gains, part of the national experience a decade ago," Weiner observes, "are erased during a time of political and social backlash. The play presents a history that forgets its own past" (Weiner, 1997).

[11] Part of the motivation behind the Cooltown website and *Mpulse* is not only to publicize HP's Cooltown technologies, but also to encourage the development of the technologies by offering some of the software code developed by HP labs to the public through GPL Open Source license. *See*: http://www.geek.com/news/geeknews/2001july/gee20010723006959.htm http://news.com.com/2100-1001-270341.html

[12] Although much of the credit for exploring the development and usability of many prototype ubiquitous computing technologies is owed to Weiser and his colleagues, motifs of mobile communication devices have been around in science fiction narratives for decades in the form of watch-phones, utility belts, smart cars, and other 007 and space-oriented fictional devices.

[13] "The digital conversation" appears very similar in style, content, and plot to the first, "Cooltown video." However, "cooltown rocks" is aimed at a younger audience with a more hip and seamless narrative that focuses on creative uses of Cooltown technologies. A fourth video, "cooltown @ school," was recently added to the site. All of the videos are available in Real Networks and Windows Media Player formats (except for "cooltown @ school" which must be downloaded as a large mpeg file).

[14] This is in interesting point in the video where the cultural troupe of lottery and casino capitalism is invoked. However, more important is how the technology is portrayed as so amazing that it resembles magic. Technology as magic metaphors and narratives are often used to focus on the achievement and functions of technologies without drawing attention to the very real social practices and series of decisions made by individuals and groups through cycles of technological innovation and development. Terry's reaction here is perhaps not logical because as a citizen of Cooltown he should be familiar with some of its technologies. But in this situation he is meant to represent us, as viewers of the video, and our assumed wonder and amazement when seeing Cooltown technologies at work.

[15] Existing technologies are marketed to a wide gamut of consumers ranging from the very wealthy to middle classes. A cyberpunk metaphor for class and culture based technologies, and the techno-turf wars that can ensue is the community 'enclaves,' and 'franchises,' autonomous mall-seized nations of greater Los Angeles, in Neal Stephenson's *Snow Crash* (1993).

[16] In this scene an elderly woman home alone suffers a heart attack. Through futuristic health monitoring technology her heart is shocked by a defibrillator, paramedics are called, and are given information about her condition via her URL which they access with mobile devices.

[17] The subtitle of Stanford professors' Byron Reeves and Clifford Nass (1996) book *The Media Equation*, pretty much says it all: "How People Treat Computers, Television, and New Media Like Real People and Places." Reeves and Nass employ the experimental methods typical of the media effects research popularized in the US in the 1970s and 1980s to observe the ways in which people act towards media devices.

[18] Spielberg's feature length film, "A.I." (2001), raises many issues of social relations between humans and machines designed to be human-like.

[19] Herman and Swiss describe Heidegger's theory of *techne* in their introduction to *The World Wide Web and Contemporary Cultural Theory* (2000): "the Web can be understood as *techne* in Martin Heidegger's (1977) sense of the term; that is, as a technology that is simultaneously an instrument and an activity through which the self and world are cast into sense, thereby transforming 'being in the world'" (p. 1-2).

[20] In fact the use of the term 'cultural object' that has been used in recent research of the modular specificities of new media

technological forms to designate specific files on a computer hard drive or the Web does not articulate the phenomenology of new media in that any notion of the cultural or existential separateness, objective isolation, of representation would be a fallacy.

[21] Crary (1990) describes the historical period of scientific studies of vision and light inspired by the camera obscura as initiating the modern epoch of vision where sensations are produced by, rather than external to, the body. Aristotle observed a camera obscura in its simplest form: the physical phenomena of an image being displayed on a white surface that is placed at the focal point on the other side of a hole that light can shine through. Later in the sixteenth century scientists used camera obscura devices with lenses, like the telescope, to make observations. This led to the development of modern camera obscura based technologies like still photography.