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The Production of Hypermobility: Digital Media and Science Fiction Television in the Long 1990s

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Abstract of the Dissertation

The Production of Hypermobility: Digital Media and Science Fiction Television in the Long 1990s

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The Production of Hypermobility explores the connections between the fantastic space travel technologies imagined in Science Fiction Television and the development of new digital media technologies within the context of shifts in late global capitalism during the 1990s. My dissertation probes these connections through charting the emergence of a new mode of mobility production, which I term "hypermobility," that emerged in this historical period. The production of hypermobility, I argue, must be understood as a specific historical arrangement or articulation of discursive, technological, economic, and political forces. Crucially, despite the utopian claims of digital media celebrants, these forces operated in a way that ensured hypermobility was not a democratic and egalitarian resource but rather a heavily stratified mode of mobility production structured by the hegemonic interests of white hetero-patriarchal capitalism. I draw the contours of this articulation through telling two inter-connected stories. One of these stories is about how new digital media technologies developed in the 90s contributed to a shifting configuration of space-time and the production of new modes of global mobility. The other is focused on the ways in which conflicting ideas about these shifts were examined in the imaginative universes of science fiction television. Together these stories help to illuminate the complex dialectical development of hyper-mobility within the historical context of late global capitalism and shifting ideological configurations within the United States in the "long 90s" between the end of the cold war and the 9/11 attacks.

This work is dedicated to the memories of William E. Smith and Cocoa Smith-Casanueva

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List of Abbreviations

DS9 – Star Trek: Deep Space Nine
SF – Science Fiction
SFTV – Science Fiction Television
ST:E – Star Trek: Enterprise
TOS – Star Trek: The Original Series
TNG – Star Trek: The Next Generation
VR – Virtual Reality
VE – Virtual Environment

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Introduction

Space-Time, Science Fiction, and Hypermobility

A few years ago, thanks to Netflix, Hulu, and Bittorent, I began re-watching many of the science fiction television (SFTV) series I remembered fondly from my youth in the 1990s. At the same time, I was teaching a class on digital television and media convergence,[1] in which my students and I spent a considerable amount of time thinking about the technologies of the 80s and 90s that preceded the current phase of expansion in digital media technologies. The coincidence of these two experiences led me to note a significant relationship between the futuristic technologies of space travel in series like *Stargate SG-1* (*SG-1*) and *Star Next: The Next Generation* (*TNG*) and the actual digital media technologies emerging at the time these series were airing. In fact, it seemed that the imagining of mobility technologies in 90s SFTV functioned to produce a defamiliarized image of new media technologies and the world they were creating.

My dissertation probes this relationship between SFTV and digital media technologies in the 90s through charting the emergence of a new mode of mobility production, which I term "hypermobility,"[2] that emerged in the 1990s. I employ this notion of hypermobility in order to

[1] The term "convergence" in academic and popular discourses has been used to describe a new media landscape in which previously separate media forms (e.g. television and Internet) have become increasingly interconnected as well as in which activities of media production and consumption have become less and less distinct. See Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (New York: NYU Press, 2006).

[2] The term hypermobility has previously been used in the study of economics, travel, and climate change to denote the practices of a relatively small number of individuals who travel frequently. While my use of hypermobility does include reference to these kinds of travel practices, I am using it to speak to a much broader transition in the way that people and information are made mobile as a result of new digital media technologies and political-economic conditions. See Mark E. Hepworth and Ken Ducatel, *Transport in the Information Age: Wheels and Wires* (Hoboken,

understand how the development of new digital media technologies and the discursive constructions of these developments via SFTV worked together to produce new experiences of space, time, speed, and movement. Most importantly, I seek to place these phenomena within the political-economic shifts in what has come to be known as "late capitalism,"[3] conceptualizing hypermobility as a particular mode of mobility production that has accompanied the "globalization" of late capitalism. The production of hypermobility, I argue, must be understood as a specific historical arrangement or articulation of discursive, technological, economic, and political forces. These forces worked to fundamentally challenge previous understandings of subjectivity and embodiment, provoking a crisis for liberal humanist definitions of the subject. Crucially, despite the utopian claims of digital media celebrants, these forces operated in a way that ensured hypermobility was not a democratic and egalitarian resource but rather a heavily stratified mode of mobility production structured by the hegemonic interests of white heteropatriarchal capitalism. I draw the contours of this articulation of material and discursive forces through telling two inter-connected stories. One of these stories is about how new digital media technologies developed in the 90s contributed to a shifting configuration of space-time and the production of new modes of global mobility. The other is focused on the ways in which conflicting ideas about these shifts were examined in the imaginative universes of SFTV. Together these stories help to illuminate the complex dialectical development of hypermobility within the historical context of late global capitalism

NJ: Wiley and Sons, 1992) and Marcia D. Lowe, *Back on Track: The Global Rail Revival* (Washington, DC: Worldwatch Institute, 1994).

[3] Originally coined by Ernst Mandel, the term was popularized as a way of referring to the current stage of capitalism by Fredric Jameson. See Fredric Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991).

and shifting ideological configurations within the United States in the "long 90s" between the end of the cold war and the 9/11 attacks.

What was it about this time period I have chosen to focus on that makes it particularly pivotal for the dominance of hypermobility? Period markers are always somewhat arbitrary, and the temporal blocking of decades does not necessarily account neatly for the pace of historical change. Nevertheless, such marking is necessary to delimit the historical field. My focus here is on the period that Phillip Wegner refers to as "the long 90s," the approximately 12 year period between the fall of the Berlin wall and the 9/11 terrorist attacks.[4] The fall of the Berlin wall in 1989 marked, at least symbolically, the end of a geopolitical regime marked by the division between the capitalist and communist world and the integration of nearly the entire globe into the circuits of capitalistic production and consumption. In understanding hypermobility's movement from an emergent to a dominant mode of mobility production, the end of the cold war and the resulting shifts within late stage capitalism are of crucial significance. The long 90s marked a period wherein a dramatic acceleration in the expansion of global capitalism merged with an unprecedented development in new digital media technologies that allowed for near-instantaneous global transfers of information, and it is this articulation that enabled hypermobility to become the dominant mode of mobility production. The 9/11 attacks provide a useful end marker for this period not because the political-economic or technological developments of the preceding 12 years were radically altered – in fact, I would argue that hypermobility continues as the dominant mode of mobility production into

[4] Phillip Wegner, *Life Between two Deaths, 1989-2001: US Culture in the Long Nineties* (Durham, NC: Duke University Press, 2009).

the present – but because it marks the first major crisis of hypermobility as well as a symbolic closure to the more utopian ideological openings of the 90s. The 9/11 attacks represented a crisis in hypermobility as the seemingly unhindered global movement of information and capital generated a reverse-movement, a blowback against the hegemony of a US-dominated capitalist form of hypermobility. Here, the image of a technology of physical mobility crashing into and obliterating a hub for informational and financialized capitalism provides an apt symbolic display of the heightening of contradictions between physical and digital mobility. The event of 9/11 also, as Wegner suggests, marked the closure of a moment "of openness and instability, of experimentation and opportunity, of conflict and insecurity— a place, in other words, wherein history might move in a number of very different directions."[5] Despite widespread inequality and gendered and racialized oppression, the indeterminacy of the time period between the fall of the Berlin wall and the fall of the twin towers held openings to possibilities of a different future, and with the dawn of the war on terror and new rounds of geopolitical reterritorializations, many of these possibilities withdrew from the popular consciousness.[6] More crucially, however, is that this time period is one in which there was a confluence of a rapid speeding up in communication technologies – evidenced most explicitly by the expansion of the Internet in the early-mid 90s but also by the introduction of digital television and consumer virtual reality technology around the middle of the decade – and an intensified

[5] Ibid., 28-9.

[6] To clarify, my argument here is not that material conditions in the US were in any way better in the 90s for marginalized groups than they were after 9/11. Rather, I am suggesting that an ideological uncertainty existed that opened up to possibilities of imagining a future in which more favorable conditions could exist, and that these openings became to a large extent closed off following 9/11 and the dawn of the war on terror.

process of “deboundarying” produced by the rapid expansion of late global capitalism, and it is this confluence that produced the phenomenon I am calling hypermobility.

Hypermobility and the Space-Time of Late Capitalism

The 1990s saw a rapid development in the growth of digital media technologies that reshaped experiences of space, time, and movement on a global scale. The emergence of new technologies including Internet, digital television, and virtual reality technology dramatically accelerated the speed at which information traveled from one point to another. At the same time, political-economic shifts also changed the mode through which mobility was produced for physical bodies and materials. While the speed with which physical matter (bodies, raw materials, physical commodities, etc.) actually moved between points did not significantly increase, there was in general an acceleration of the rate of physical mobility. In other words, people and things were in motion more often and across more extended distances. However, this acceleration of physical mobility occurred in a highly uneven manner. While for global elites jet-setting across the globe for business or recreation became increasingly common, for a significant portion of the global population, accelerated mobility often meant forced movement due to poverty, war, and environmental catastrophes. The basic process by which these shifts in the production of mobility occurred is what I am calling hypermobility.

Hypermobility can best be defined by a particular group of characteristics relating to shifts in space, time, and movement that resulted from the confluence of new digital media technologies and transitions in late stage capitalism:

- A widening gap between physical and electronic mobility

- Near-light speed transmission of information
- The experience of space as movement
- Global integration of communication networks
- Free mobility of capital
- Acceleration of physical mobility
- Inequality in the production of physical mobility
- Formation of new subjectivities and forms of embodiment

In order to flesh out these characteristics and their implications, it is necessary to take a brief journey through some of the crucial work that began to emerge in the 80s and 90s exploring new space-time configurations and to expand on this work to identify the specific shifts occurring during the long 90s that contributed to the dominance of hypermobility. Here, I am deeply indebted to work in Marxist and transnational feminist theory that has attempted to come to terms with the rapidly shifting experiences of space and time produced by late global capitalism. To think about the technological and political-economic changes of the 90s in terms of hypermobility is to consider the alterations in the experience and perception of space and time and to make speed and movement, in terms of both transportation and communication, central to these investigations, focusing on how they changed and were changed by new space-time configurations.

That there was a radical change in the experience of space and time and the relationship between the two sometime in the late 70s to early 80s became a commonplace in theoretical attempts to sort out the cultural and political-economic changes that would come to be understood under the somewhat ambiguous term “postmodernism.” Fredric Jameson, for

instance, argued that postmodernism was marked by a taking over of the perceptual categories of time by those of space.[7] David Harvey's theorization of time-space compression has provided one of the most widely cited and compelling outlines of the transformations in the relationship between time and space that have occurred in the historical period of "postmodernity." For Harvey, changes in the experience of space and time must be understood in relation to shifts in material processes. "Each distinctive mode of production or social formation will," he insists, "embody a distinctive bundle of time and space practices and concepts."[8] Concepts and experience of time within the capitalist mode of production have been characterized by an increasing acceleration. Harvey defines time-space compression as "processes that so revolutionize the objective qualities of space and time that we are forced to alter…how we represent the world to ourselves."[9] The transition to a post-Fordist form of capitalism, he argues, has resulted in "an intense phase of time-space compression."[10] Crucially, Harvey links these shifts to the intensifying financialization of the economy facilitated by new information technologies. He writes that:

> Deregulation and financial innovation…[became] a condition of survival in any world financial centre within a highly integrated system coordinated through instantaneous telecommunications. The formation of a global stock market, of global commodity (even debt) future markets, of currency and interest rate swaps, together with an accelerated geographical mobility of funds, meant, for the first time, the formation of a single world market for money and credit supply.[11]

[7] Fredric Jameson, "Postmodernism; or, the Cultural Logic of Late Capitalism," *New Left Review* 146 (1984): 53-92.
[8] David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Cambridge, MA and Oxford: Blackwell, 1989), 204
[9] Ibid., 240.
[10] Ibid., 284.
[11] Ibid., 161.

The development of new communication technologies that permitted instantaneous transfer of information thus created the conditions for a mode of capitalism partially displaced from material production and consumption that thrived on the trade of information-based commodities in what has more recently come to be called the financialization of capital.[12] The expansion of the Internet in the early 90s, which increased its availability for use by both private citizens and corporate actors, operated to further facilitate the speeding up of the process of the financialization of capital, strengthening its hegemony and marking the intensified acceleration and boundary-destructing force of finance capital within the hypermobile mode of mobility production. Beyond the broad-scale space of information flows within global corporate networks, the financialization of capital, with the help of the Internet-connected home computer, has also transformed the experience of space in everyday life. As Randy Martin observes, "what the front door of the home once left behind is now invited into that paramount relaxation center – the den – via electrical outlet and telephone jack."[13]

Theorists such as Jean Baudrillard[14] and Mark Poster[15] have taken these observations even further, arguing that capitalism has come to operate within a purely informational sphere of circulation, no longer tied to the material conditions of production and consumption that was determinate under earlier forms of capitalism. Recognizing the transformations wrought by the informatization of capitalism but insisting on an analysis that remains grounded in the material conditions of capitalism, sociologist Ben Agger has developed the concept of fast

[12] John Bellamy Foster, "The Financialization of Capital and the Crisis," *Monthly Review* 59, no. 11 (April 2008), https://monthlyreview.org/2008/04/01/the-financialization-of-capital-and-the-crisis/.
[13] Randy Martin, *Financialization of Everyday Life* (Philadelphia: Temple University Press, 2002), 2.
[14] Jean Baudrillard, *For a Critique of the Political Economy of the Sign* (Candor, NY: Telos, 1981).
[15] Mark Poster, *The Mode of Information* (Chicago: University of Chicago Press, 1990).

capitalism to explain the speeding-up of life and the annihilation of spatial boundaries under late capitalism. Capitalism, Agger argues, "has accelerated, become global, dedifferentiated its institution, and colonizes the self and everyday life." Fast capitalism is marked by its "accelerating, instantaneizing, dedifferentiating, deboundarying, and globalizing" tendencies.[16] Like Martin in his analysis of financialization, Agger focuses on the ways in which the speeding-up of capitalism has transformed the various spheres of everyday life, arguing in particular that there has been a collapse of the (always tenuous) division between public and private space effected by the Internet and other new media technologies. As I turn to questions of the "hypermobile family" in chapter 3, the significance of this collapse of the boundary between domestic and public space becomes a crucial question. Although Agger specifically credits the Internet as a key factor in this speeding up of capital and collapse of boundaries, I would suggest that the Internet is simply the most prominent symbol of a rapidly changing digital media environment – one that included digital and interactive television, VR technology, and early advances in mobile device technology – that would together constitute hypermobility as a dominant mode of mobility production. It was indeed the confluence of these various interconnected technologies and the accelerating expansion of global capitalism, both as a result of these technologies and the internal dynamics of capitalism, that would come to define hypermobility in the 90s.

What can we make, then, of the significance of these alterations in the experience and understanding of space and time in terms of the production of hypermobility? In terms of time,

[16] Ben Agger, *Speeding up Fast Capitalism: Cultures, Jobs, Families, Schools, Bodies* (Boulder and London: Paradigm, 2004), 12.

late global capitalism has produced a general acceleration, a speeding-up of time, as well as a sense of instantaneity. Here, it is the high-speed mobility of information enabled by new media technology that is central to both acceleration and instantaneity. This speed-up is, of course, not an entirely new phenomenon. As Harvey observes, in the pursuit of speeding up turnover time and thus maximizing profit, capitalist modernization entailed the "speed-up and acceleration in the pace of economic processes and, hence, in social life."[17] But in the era of hypermobile late global capitalism, this acceleration has reached a new and intensified level. The high speed of information transfer via digital technologies have produced what Agger identifies as the phenomenon of instantaneity. Instantaneity refers not only to "the sheer speed of computers with high-speed internet connections" but also to "the human experience of accelerated information flows and the impact these have on the sensibilities of people."[18]

The phenomena of acceleration and instantaneity have, however, occurred in very particular and uneven ways. Crucially, the acceleration of the flow of information and that of physical bodies and objects have taken highly differential forms. The most essential characteristic of hypermobility is that it involves a widening and insurmountable gap between the speed at which physical bodies and materials travel from one point to another and that at which information or data does so. Put somewhat differently, hypermobility involves the extreme outpacing of transportation by communication. Within hypermobility, this gap has widened to the extent that it cannot, at least practically, be joined. Networks of fiber-optic cable allow information to travel at speeds approaching the speed of light. Meanwhile, the

[17] Harvey, 230
[18] Agger, 6.

limits of physical travel constrain it from reaching even a fraction of this speed. For instance, the speed with which a user could send an email to someone across the globe or access a website hosted on a server thousands of miles away dramatically outpaces the speed at which this same person could physically travel to these locations.

Nevertheless, hypermobility has also entailed an acceleration of physical mobility. While the free mobility of capital relies in part on the acceleration of the digital mobility of information, it also relies on an acceleration in the physical mobility of embodied labor, raw materials, and physical commodities. The rise of transnational corporations and neoliberal free trade agreements have led to a dramatic acceleration in physical mobility as transnational capitalists move the means of production easily between nations and depend increasingly on the mobility of immigrant labor, made to be flexibly[19] mobile in order to attain some measure of economic security. The passing of the North American Free Trade Agreement (NAFTA) in 1994, for instance, increased both the physical flow of Mexican labor into the United States and the flow of US-owned means of production into Mexico. However, the flow of Mexican immigrants was highly policed and channeled through limited networks, while the flow of US capital did not face such restrictions. The acceleration of physical mobility to further the interests of a global capitalist class ensures that this mobility is highly-stratified, with global elites and transnational corporations experiencing freely selected and nearly unlimited mobility, while the physical labor necessary for the maintenance of these interests is subjected

[19] On the significance of flexibility for labor practices under late global capitalism, see: Manuel Castells, *The Rise of the Network Society* (West Sussex: Wiley-Blackwell, 2010).; Zygmut Bauman, *Liquid Times: Living in an Age of Uncertainty* (Cambridge: Polity Press, 2007); Richard Sennett, *The Corrosion of Character: The Personal Consequences of Work in the New Capitalism* (New York: Norton, 1998); and Jens Kjaerulff, ed., *Flexible Capitalism: Exchange and Ambiguity at Work* (New York and Cambridge: Berghahn, 2015).

to a regime of highly constrained and forced mobility and immobility. Beyond the forced physical mobility of economic insecurity, these same populations are also subjected to forced immobility as the result of political turmoil and environmental disaster – we might think for example of the Bosnian war or the Rwandan Genocide, both taking place in the mid-90s – both at least indirectly results of the expansion of global capitalism. The capitalist class, however, remains largely immune from the forced migration and immigration necessitated by these repercussions.

Another product of acceleration and instantaneity has been the experience of space as movement. In his discussion of virtual reality technologies, Ken Hillis notes there has been a shift in the conceptualization of space from an understanding of space as distance to one of space as movement.[20] This shift is a crucial one in the emergence of hypermobility as the dominant mode of mobility production. The effects of time-space compression have meant that people begin to understand space in the terms of its traversal by networks of information flows. In other words, individuals' conceptualization of space and movement is mediated by the geography of digital networks more heavily than networks of physical mobility. Thus, rather than space being conceptualized as distance that separates one point from another, it is understood in terms defined by digital technologies as the movement of information between these points.

Along with the speeding up of time, the historical development of capitalism has also seen a tendency towards the destruction of spatial barriers and the rational organization of

[20] Ken Hillis, *Digital Sensations: Space, Identity, and Embodiment in Virtual Reality* (Minneapolis and London: University of Minnesota Press, 1999), 197.

social space. As Harvey argues of the historical development of capitalism, "the incentive to create the world market, to reduce spatial barriers, and to annihilate space through time is omni-present, as is the incentive to rationalize spatial organization into efficient configurations of production…circulation networks…and consumption."[21] Agger refers to this tendency as the deboundarying effect of fast capitalism.[22] This deboundarying effect has produced another defining characteristic of hypermobility in the ability of capital to flow largely unimpeded across the globe, regardless of national boundaries. The financialization of capital and the shift towards what Harvey has identified as the post-Fordist mode of accumulation marked by flexibility and spatial dexterity have been to a large part spurred on by the elimination of both technological and political barriers to the global expansion of capital. The elimination of these barriers has tended toward the integration of the entire (or at least almost entire[23]) globe into the communication networks created by digital media. This means that the boundaries of communication are no longer determined by national borders in the same way that they were previously.[24] This does not mean that nations and national borders are no longer significant or

[21] Harvey, 232.
[22] Agger, 12.
[23] While at a broad geographical level, communication networks approached near-complete integration of the globe, access to these networks was, and continues to be, heavily unevenly distributed, in effect producing a global society divided between those connected within global circuits of information exchange and those excluded from these circuits. This inequality in access to information technology has come to be termed "the digital divide" and the existence of this divide has been discussed in academic and popular literature as an impediment to global civic and economic participation. See Pippa Norris, *The Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide* (Cambridge: Cambridge University Press, 2001). Martin Hopenhayn notes that in the nations of the global south, economic inequality in concert with inequality in access to digital communication networks has created a division between individuals and groups integrated into the global cultural and economic circuits, who have more in common with their Western counterparts than others within their own nation, and the non-integrated, those communities on the margins that lack access to the symbolic and economic goods of the global economy. Martin Hopenhayn, *No Apocalypse, No Integration: Modernism and Postmodernism in Latin America*, trans. Cynthia Margarita Tompkins and Elizabeth Rosa Horan (Durham, NC: Duke University Press, 2001).
[24] On this point see, for example, Michael Hardt and Antoni Negri, *Empire* (Cambridge, MA and London: Harvard University Press, 2000) and Castells.

that we've entered an era of complete globalization entailing the annihilation of these borders. Rather, these borders are being made more porous and less absolute as they become increasingly traversed by digital communication networks. Again, the neoliberalization of trade occurring in the 90s – and in particular NAFTA, which served as a major deboundarying force in the expansion of capital in the Western Hemisphere – point to the intensifying annihilation of national boundaries by expanding capital. Around the same time as Clinton was negotiating NAFTA, his vice president Al Gore was proclaiming the emergence of a global information superhighway that would bring earth together in a global democratic polity and sphere of information exchange. Thus, within the actions and rhetoric of the ruling powers in the US in the mid-90s, we find the confluence of political-economic and technological forces that would fuel the deboundarying processes of hypermobility.

The deboundarying or "annihilation of space through time" of late capitalism has not, however, produced a uniform or undifferentiated global space. Rather, geographical particularities have become more important for capital. It has become easier, for example, for transnational corporations to grow their profits through exploiting the particularities of local labor and consumption markets. The spatial reconfigurations of late global capitalism have thus produced a complex relationship between global and local spaces. Time-space compression's tendency towards the smoothing out of geographic barriers and erasure of local particularity is countered both by capital's interest in exploiting the particularity of locations and selective appropriation of globalized culture by different communities. This simultaneous expansion of global capital and attention to geographic particularity has a long history in Western colonialism and the exploitation of racialized labor. Anibal Quijano notes the way in which the Spanish

colonization of the Americas introduced a mode of capitalist expansion by which all historical forms of labor (slavery, feudalism, etc.) were articulated to the mechanisms of global capitalism.[25] Gayatri Spivak similarly recognizes how global capitalist imperialism interacted with "pre-modern" social forms in the global south in a way that operated to maintain and reproduce class, gender, and racial hierarchies.[26] Late global capitalism's exploitation of geographic particularities in its expansionary phase coinciding with hypermobility thus represents a continuation of these historical colonialist and racist techniques crucial to the capitalist mode of production.

Transnational feminist theory has been particularly insightful in recognizing and analyzing these complex geographic relationships. Caren Kaplan and Inderpal Grewal have put forward the idea of "scattered hegemonies" to describe "the effects of mobile capital as well as the multiple subjectivities that replace the European unitary subject."[27] Noting that gender is often overlooked in work on political economy, they argue for a mode of analysis that is attuned to the historically particular ways in which transnational capital is articulated to multiple location-specific patriarchies. Such a mode of analysis provides a useful insight into the intersections of the rise of digital television technology and capitalist expansion in the 90s. The passing of NAFTA allowed for the expansion of factories south of the US-Mexican border involved in the production of the hardware necessary for the growth of digital television

[25] Aníbal Quijano, "Coloniality of Power, Eurocentrism, and Social Classification," in *Coloniality at Large: Latin America and the Postcolonial Debate*, eds. Mabel Moraña, Enrique Dussel, and Carlos A. Jáuregui (Durham, NC: Duke University Press, 2008), 181.
[26] Gayatri Spivak, "Can the Subaltern Speak?" in *Marxism and the Interpretation of Culture*, eds. Cary Nelson and Lawrence Grossberg (Urbana: University of Illinois Press, 1988).
[27] Inderpal Grewal and Caren Kaplan, "Introduction: Transnational Feminist Practices and Questions of Postmodernity" in *Scattered Hegemonies: Postmodernity and Transnational Feminist Practices*, eds. Inderpal Grewal and Caren Kaplan (Minneapolis and London: University of Minnesota Press, 1994), 7.

systems. These *maquilladoras* overwhelmingly employed poor female workers who were often subject to repressive and unsafe labor conditions and sexual harassment. Thus, the growth of digital television networks that played a significant part in the rise of hypermobility was predicated on the exploitation of gendered Mexican labor.

The contradictions of the local and global within transnational capitalism are particularly apparent in the context of the United States where, as Grewal notes, "while the American corporate mantra remains becoming 'global,' the borders…are being increasingly policed against particular groups of non-whites."[28] Here, the reboundarying effects of border security practices form a dark underside of hypermobile capitalism's deboundarying expansion championed by US companies and governmental policies. While we see here how the relationship between localized particularities and global flows of capital works to produce specific forms of exploitation and oppression that target women and people of color, they can also, as Chandra Mohanty argues, open up opportunities for new solidarities in the struggle against global capitalism, Eurocentrism, and patriarchy.[29] These insights from feminist theory lead us to a crucial point, one to which I will return repeatedly throughout this dissertation. The crisis in the liberal humanist model of subjectivity and embodiment instigated by the deboundarying and speeding-up of experiences of space and time was not experienced in the same way for all subjects. Indeed, its effects were highly differentiated based on gender, race, sexuality, and geographical locatedness.

[28] Inderpal Grewal, *Transnational America: Feminisms, Diasporas, Neoliberalisms* (Durham and London: Duke University Press, 2005), 15.
[29] Chandra Talpade Mohanty, *Feminism Without Borders: Decolonizing Theory, Practicing Solidarity* (Durham and London: Duke University Press, 2003).

Grewal points out that, contra totalizing theories that claim a new deterritorialized form of global power, the deterritorializations of global capitalism are often met with reterritorializations of power.[30] Such reterritorializations bring to light how time-space compression has also produced a deep sense of anxiety over the loss of geographic boundaries and social permanence. This anxiety has manifested itself in a myriad of ways and in both regressive and progressive forms. One area in which we can see a reaction against the deterritorializing effects of space-time compression is, as I explore in chapter 1, a resurgence in nationalism and a xenophobic response to the technological and economic development of Asian countries. We can also see it in the retrenchment of heteronormative family values, as I examine in chapter 3.

These spatio-temporal shifts that I have identified as constitutive of hypermobility's rise to dominance in the 90s also generated significant anxieties among those whose experiences of space and time were being radically reformed. While I outline these anxieties in more detail in the body chapters, I think it is useful here to briefly discuss these anxieties as a response to hypermobility and the ways in which they were rooted in particular subject positions. For those groups historically oppressed by the systems of white heteropatriarchal capitalism, hypermobility was perhaps less a source of anxiety and more of a confirmation that while the specific modalities of oppression under hypermobility might shift, these shifts held no promise of liberation in their dominant forms. What is notable, however, is the anxiety provoked in those groups who had historically benefited from these systems of oppression. The white, heterosexual, male, and economically advantaged subject, the privileged subject of white

[30] Grewal, 21.

heteropatriarchal capitalism and liberalism, experienced a crisis amidst these technological and political-economic transitions. The anxieties of this group in response to the processes of hypermobility centered primarily on a fear of the destabilization of boundaries, whether geographic boundaries between nations threatened by the speed of digital communication, the boundaries of the physical body thrown into question by virtual reality, or the boundaries between public and private spaces destabilized by the presence of the internet-connected home computer. One of my central focuses in this dissertation will be the way in which these anxieties manifested and how new technological practices and ideological operations attempted to quell these anxieties in ways that ensured the continuing hegemony of the privileged subject of capitalism and liberalism.

The (Hyper)mobile turn

The complex and contradictory processes involved in the spatio-temporal shifts of late global capitalism I identify above suggest the importance of an approach to their analysis that is attuned to the movement, both in generalized and particular form, of people, capital, ideas, and information. It is here where I want to suggest that conceptualizing these changes in terms of mobility can render particularly important insights.

In a sense, what I am trying to achieve by deploying the concept of hypermobility is to look at time-space compression from the perspective of movement. I am interested in how changing experiences of space and time are constituted by the movement of people and information and in turn how new space-time regimes constitute new forms of mobility. Movement is often an undertheorized variable in the equation of space-time compression.

Thinking in terms of mobility provides a way to understand the relationship between space, time, and movement that does not emphasize one at the expense of the others, but recognizes their co-constitutionality.

Mimi Sheller and John Urry suggest there has been a "mobility turn" in the social sciences with work focused on "putting social relations into travel and connecting different forms of transport with complex patterns of social experience conducted through communications at-a-distance."[31] In foregrounding mobility in this project, I am indebted to the work that has resulted from this "mobility turn" and the emergence of mobility studies. This work has "mobilized" the "spatial turn" in the humanities and social sciences, extending the analysis of space "to examine how the spatialities of social life presuppose…both the actual and the imagined movement of people from place to place, person to person, event to event."[32] Foregrounding mobility also helps to focus on the inequalities and uneven development created by time-space compression through examining the ways in which the production of mobility relies on the uneven concentration of mobility resources. As Sheller and Urry argue, the mobilities paradigm "account[s] for not only the quickening of liquidity within some realms but also the concomitant patterns of concentration that create zones of connectivity, centrality, and empowerment in some cases, and of disconnection, social exclusion, and inaudibility in other cases."[33] Indeed, as I argue above, this uneven development in the production of mobility is one of the defining characteristics of hypermobility. One of my guiding aims in this dissertation is thus to track "the power of discourses and practices of mobility in creating both

[31] Mimi Sheller and John Urry, "The New Mobilities Paradigm," *Environment and Planning A* 38 (2006): 208.
[32] Ibid.
[33] Ibid., 210.

movement and stasis."[34] I attempt to do this through juxtaposing an analysis of how new digital media technologies have contributed to the production of new forms of mobility with an examination of the discourse around these new forms of mobility that emerges in the SFTV of the 90s.

The "mobility turn" and development of mobility studies has also enabled an interrogation of the interrelations of subjectivity and mobility. Caren Kaplan, for instance, argues that the concept of the liberal humanist subject is intimately tied to mobility. As she points out, "the emancipation of ideas promised by flows across borders and boundaries is a Western Enlightenment dream – no boundaries for the mind or subject."[35] The Enlightenment subject is thus an inherently mobile subject, determined by its desire for and capacity for movement across borders, and therefore the seemingly unrestrained virtual mobility enabled by new media technologies represents a fulfillment of Enlightenment subjectivity. Crucially, as Kaplan points out, this Enlightenment fantasy of disembodied mobility that re-emerges in the discourse around new digital media technologies works to discount the importance of located embodiment for the situated knowledges of women, people of color, and other oppressed groups.[36] The promise of disembodied mobility, in other words, offers the re-constitution of a white and hetero-masculine mobile subjectivity while denying the significance of the embodied experiences and positionality of less-empowered subjects.

[34] Ibid., 211.
[35] Caren Kaplan, "Transporting the Subject: Technologies of Mobility and Location in an Era of Globalization," *PMLA* 117, no. 1 (2002): 35.
[36] Ibid., 36-37

However, the hegemonic liberal humanist subject is not immune from anxiety over the possibility of leaving the body behind and achieving disembodied mobility. At the same time as disembodied mobility promises new freedoms and empowerment for this subject, the virtuality or immateriality of new forms of mobility threatens the power and integrity of the Enlightenment subject as its self-ownership of its body and control over physical mobility are threatened. As Shannon Winnubst argues, historically central to subjectivity within the regime of what she terms "phallicized whiteness" is the notion of the self as a subject contained within a discrete body.[37] The radical disembodiment promised by advanced digital technologies threatens, at one level, the security of this self-contained white hetero-masculine subject while also feeding into the desire Winnubst identifies to expand beyond the space of the self and assimilate the other.[38] There thus continues to be, as Kaplan observes, a persistent "oscillation and tension between the liberating promise of mobility and the security of fixed location."[39] As I will argue in chapter 2, this tension between the desire for disembodied mobility and the security of a self-possessed mobile body is central to cultural anxieties and fantasies about VR technology.

These shifts in subjectivity and embodiment produced by hypermobility are crucial to making sense of the large-scale cultural restructuring effected by hypermobility. Hypermobility not only changes speed and movement but it challenges the very definition of the human subject that has undergirded modern forms of power, knowledge, and movement. The effects of this crisis have been experienced differentially and in contradictory ways by those inhabiting

[37] Shannon Winnubst, *Queering Freedom* (Bloomington, IN: Indiana University Press, 2006), 19.
[38] Ibid.
[39] Kaplan, 35.

different subject positions. On one hand, for example, the white, male, heterosexual Western subject that had gained a taken-for-granted position as the natural subject of liberal humanism found its hegemony threatened by transnational and disembodied flows of information. However, at the same time, these subjects were able to reassert their centrality through embracing a cyborgian subjectivity that reconstructed liberal human subjectivity and control within the networks of cyberspace. For marginalized groups, the annihilation of physical boundaries effected by hypermobility technologies in some ways opened up new possibilities for experiencing a freedom of movement unmoored from bodies and localities that had been subjected to oppression within modern liberal humanism. However, it also threatened to overturn the gains made by these groups through material struggles to contest the hegemony of global capitalism, sexism, heteronormativity, and racism through proclaiming the irrelevance of previous identity positions in a posthuman era.[40] Moreover, the different material positions of these subjects meant that they did not have the same access to technologies of hypermobility as did the subjects already empowered within the structures of Eurocentric heteropatriarchal capitalism.

[40] Work on posthumanism has been somewhat ambivalent about the relationship between posthumanism and liberal humanist fantasies of disembodiment. Both Donnna Haraway and N. Katherine Hayles, for instance, critique posthumanism for its embrace of Enlightenment fantasies of disembodied existence and argue for a new kind of posthumanism (although Haraway rejects the term) that engages with the liberatory potential of new cyber-technologies while recognizing the importance of the embodied and located subjectivity of marginalized groups. Donna Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991). N. Katherine Hayles, *How we Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago and London: University of Chicago Press, 1999). For Carey Wolfe, by contrast, posthumanism "opposes the fantasies of disembodiment and autonomy, inherited from humanism itself, that Hayles rightly criticizes." Carey Wolfe, *What is Posthumanism?* (Minneapolis and London: University of Minnesota Press, 2010).

The Hypermobile Mode of Production

The characteristics of hypermobility that I have outlined above all work to define hypermobility as a mode of mobility production. While the concept of "mode of production" evokes the large-scale and complete shifts from one mode of production (e.g. feudalism) to another (e.g. capitalism), I am envisioning mode of production here in somewhat narrower terms as denoting smaller-scale shifts within the dominant mode of production. While the dominant mode of production (capitalism) does not give way to a new mode, there are more subtle shifts within the dominant mode of production that entail significant shifts in the way that capitalism operates. Hypermobility, as a mode of mobility production, thus refers to significant shifts in the way in which mobility is produced within the overarching capitalist mode of production.

Within this mode of production, the different characteristics of hypermobility work in a fluid formation of interconnected modalities. Thus, while I identify the widening gap between physical and electronic or virtual mobility as a defining characteristic of hypermobility, it's crucial to recognize that hypermobility involves the production of both electronic and physical mobility, and that these different forms of mobility need to, as Sheller and Urry argue, "be examined in their fluid interdependence and not in their separate spheres."[41] They also note an "increasing convergence between transport and communication, 'mobilising' the requirements and characteristics of copresence."[42] Thus, while hypermobility is marked by an increasing divide between the relative speeds of transport and communication, these systems

[41] Sheller and Urry, 212.
[42] Ibid., 221.

nevertheless remain intimately interconnected. Moreover, recognizing this interconnectivity works as a corrective to celebratory discourses of cyber-mobility that, in the words of Caren Kaplan, rely "heavily on a hyperbole of unlimited power through disembodied mobility." Kaplan notes that while cyber-mobility appears as a weightless escape from the constraints of the materiality of modernity, "a closer look reveals location and materiality in mobility and the disembodied discursive practices of new information technologies," particularly in terms of the globalized mobility of labor.[43] Part of what I attempt to do throughout my exploration of the material and discursive production of hypermobility is to draw attention to the persistence of a located materiality in the new media technologies of hypermobility, whether in the persistent preoccupation with the place of the physical body in virtual reality or the material labor practices involved in the production of digital television technologies.

It is also crucial to recognize that hypermobility is not a monolithic, uniform, or entirely consistent formation but rather is riddled with contradictions and tensions, and these tensions manifest themselves both in the material development of hypermobility technologies and in the discursive construction of these technologies. As Harvey notes, "beneath the veneer of common sense and seemingly 'natural' ideas about space and time, there lie hidden terrains of ambiguity, contradiction and struggle."[44] It is part of my project here to explore these hidden terrains in the ideas about space, time, and movement that came to the fore under hypermobility. I am particularly interested in how the rapid shifts in the production of mobility engender anxieties that lead to attempted spatial-temporal reterritorializations, whether of the

[43] Kaplan, 34.
[44] Harvey, 205.

nation, the body, or the home. The SFTV texts I analyze in this dissertation are intriguing especially because of the way they highlight the tensions and contradictions of hypermobility, drawing attention to the anxieties surrounding the rise of hypermobility and the dialectic of deterritorialization and reterritorialization involved in the production of hypermobility. These texts remind us that dominant ideas about space, time, and movement during this period were not ideologically consistent, nor were they incorporated by people without resistance and negotiation.

Historicizing Technologies of Hypermobility

It is important to note that hypermobility did not emerge suddenly out of nowhere as the dominant mode of mobility production. While I am arguing that hypermobility became dominant following the end of the cold war, it existed as an emergent mode well before this era. If we conceive of hypermobility as characterized predominantly by a widening gap between physical transportation and communication, the development of the telegraph in the late 19th century can perhaps be understood as the moment in which hypermobility first became an emergent, or at least novel, mode of mobility production. The telegraph marked the first point at which the speed of communication was no longer constrained by forms of physical travel. Information could travel across telegraph wires at speeds significantly greater than messages could be physically transported by people. Before the telegraph, when the locomotive determined the greatest speed at which information could travel, informational mobility was tied directly to physical mobility. With the telegraph, however, the locomotive no longer provided the fastest form of communication, and thus began a century-long process in which

the speed of communication increasingly outpaced that of physical mobility.[45] Arguably, the most significant interceding developments between the telegraph and the computerized digital networks of the 1990s were first radio and then television. The development and utilization of radio waves for broadcasting sound technically marked the first light-speed technological transmission of information. Practically, however, while radio waves always travel at the speed of light, as they pass through objects, they interact with these objects, and thus the path they travel is not a straight line but a highly circuitous route, meaning that in terms of the time it took a radio wave to travel from transmitter to receiver, the speed of transmission appeared to be significantly below the speed of light. Nevertheless, both radio and television technologies utilized electromagnetic transmission to broadcast at speeds well beyond those achievable by physical transportation. As radio and television waves travel at the same speed, the transition between the two was not about an acceleration of transmission speeds but a dramatic increase in the density and complexity of information being transmitted. The transmission of visual-audio signals required the ability to transmit significantly more information while maintaining the near-instantaneous transmission of radio. While both radio and television were limited in their transmission to relatively small regions, they were tied into a national infrastructure of broadcasters creating a sense that the same information could be transmitted simultaneously and immediately to a national audience.[46] Beyond simply the national level, radio and television

[45] On the telegraph's historical role in the production of space-time and "as a model for future developments in communications," see James Carey, *Communication as Culture: Essays on Media and Society* (New York and London: Routledge, 1992) 201-30.

[46] On the role of television in the construction of the nation, see: David Morley, *Home Territories: Media, Mobility and Identity* (London and New York: Routledge, 2000); Monroe E. Price, *Television, the Public Sphere, and National Identity* (Oxford: Oxford University Press, 1995); and Paddy Scannell, *Radio, Television and Modern Life* (Oxford: Blackwell, 1996).

contributed to a world in which information could flow with considerable speed across national boundaries, contributing to a sense of inhabiting a global community where, as Marshall McLuhan wrote, "electronic interdependence re-creates the world in the image of a global village."[47]

While this brief sketch points to transitions in the technological production of mobility throughout the 20th century, the development of media technologies in isolation is not a sufficient explanation for the ascendance of hypermobility as a dominant mode of mobility production. While these technologies were an important force in producing hypermobility, they developed within a particular set of historical political-economic, social, and cultural conditions. Crucial to the emergence of hypermobility as a dominant mode in the 90s was the continuing development of global capitalism along a trajectory it began in the early 70s, when it started to undergo significant shifts within its mode of production. The transition from a Fordist to a post-Fordist regime of accumulation brought about an intensifying focus on geographic and temporal flexibility and the financialization of capital.[48] Accelerating a process already taking place in the 70s and 80s, in the period following the end of the cold war global capitalism became increasingly dependent on and its operation imbricated in new technologies. Douglas Kellner puts forward the notion of "technocapitalism" as a way to understand the increasing interdependence of capitalism and advanced technologies. For Kellner, technocapitalism signifies "the synthesis of capital and technology in the present organization of society" and recognizes "both the increasingly important role of technology and the enduring primacy of

[47] Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto: University of Toronto Press, 1962), 31.
[48] Harvey, 124.

capitalist relations of production."[49] Conceiving of hypermobility as a development of technocapitalism helps us to understand hypermobility as a product of both technological shifts and shifts in the capitalist mode of production without succumbing to either a technological determinist model or an overly reductive economic determinism.

Part of my interest in historicizing the development of hypermobility is in problematizing popular narratives of technological change that understand these changes as progressive movements towards a future in which technology increasingly liberates humanity. Within such narratives, each new development in media technologies mark an expansion of human freedom and capability. Thus, these changes are understood within a progressive narrative of historical movement. In attempting to understand the technological developments that have contributed to the production of hypermobility within the context of shifts in late global capitalism as well as focusing on the tensions and contradictions within hypermobility, I seek to resist and question such progressive narratives.

SFTV and hypermobility

Throughout its history, a central focus of the SF genre has been one on new forms of technology and the way in which these technologies reshape human experience. As Scott Bukatman notes, SF takes as its focus "the interface of technology with the human subject."[50] Moreover, in the contemporary era, SF seems particularly suited not only to "the narration of

[49] Douglas Kellner, "New Technologies: Technocities and the Prospects for Democratization" in *Technocities*, eds. John Downey and Jim McGuian (London: Sage, 1999), 193.
[50] Bukatman, 8

new technological modes of being in the world"[51] but also to producing an estranged vision of the social world of late global capitalism.[52]

It is important to understand hypermobility not as a product of only material forces but of discursive forces as well. The way in which the changes in mobility and the experience of space and time are talked about and understood are equally as important in the production of hypermobility as the technological and political-economic forces involved. In other words, hypermobility is also a cultural phenomenon, and it is crucial to understand the way in which it has been culturally constructed. SFTV, I suggest, has played a crucial part in the discursive construction of hypermobility. SFTV both provides a critical attempt to understand the emergence of hypermobility and operates as part of a broader discourse involved in the cultural construction of hypermobility.

SF's capability to produce what Darko Suvin refers to as "cognitive estrangement" in its audiences is central here in my understanding of how SFTV can provide a critical reflection on the emergence of hypermobility as a dominant mode of mobility production. For Suvin, SF is marked by the "interaction of estrangement and cognition," where estrangement denotes a formal and narrative creation of "an imaginative framework alternative to the author's empirical environment," while cognition indicates a plausible relationship to the author and audience's reality.[53] Cognition in SF "implies not only a reflecting of but on reality…[and] a

[51] Ibid.

[52] Within SF and utopian studies, this latter argument has been advanced notably by Fredric Jameson and Phillip Wegner. See Fredric Jameson, "Fear and Loathing in Globalization," in *What Democracy Looks Like: A New Critical Realism for a Post-Seattle World*, eds. Amy Schrager Lang and Cecila Tichi (New Brunswick, NJ: Rutgers University Press, 2006) and Phillip E. Wegner, "Soldierboys for Peace: Cognitive Mapping, Space, and Science Fiction as World Bank Literature," in *World Bank Literature*, ed. Amitava Kumar (Minneapolis and London: University of Minnesota Press, 2003).

[53] Darko Suvin, "On the Poetics of the Science Fiction Genre," *College English* 34, no. 3 (1972): 375

creative approach tending toward a dynamic transformation rather than toward a static mirroring of the author's environment."[54] The interaction between cognition and estrangement opens up to the possibility of a critical reflection on reality through presenting that reality in a way that appears strange, thus disrupting naturalist modes of representation. While Suvin's definition of SF as cognitive estrangement is useful in understanding the potentially critical function of SF in reflecting on current reality, his reliance on a Brechtian sense of defamiliarization as a formal technique seems less applicable in making sense of how SFTV, which tends to employ conventional formal techniques, can produce a sense of cognitive estrangement in the viewer. Simon Spiegel reworks Suvin's theory of cognitive estrangement to show how SF works through an interplay of naturalization and diegetic estrangement. As Spiegel explains, "whenever a marvelous element is introduced into a seemingly realistic world, a collision occurs between two systems of reality, producing an estranging effect. The familiar appears in new surroundings and is thereby recontextualized."[55] In the worlds of the SFTV series I look to throughout this dissertation, it is this colliding of the realistic and the strange that best accounts for the estranging function of these works.

Here, it might be useful to think of SFTV's engagement with hypermobility in terms of Henri LeFebvre's three categories of spatial production. LeFebvre divides spatial production into spatial practices – the physical interactions of material spaces – representations of space – the symbolic representation that give meaning to physical spaces – and representational spaces

[54] Ibid., 377.
[55] Simon Spiegel, "Things Made Strange: On the Concept of 'Estrangement' in Science Fiction Theory," *Science Fiction Studies* 35 (2008): 375.

– the imagining of new spaces and spatial practices.[56] Borrowing from LeFebvre's categories, Harvey lists "science fiction ontologies and space" as a representational space or imaginative production of space.[57] If we expand LeFebvre's schema to include not only space but the relationship between space, time and movement that constitutes mobility, we can argue that SFTV participates both in the perceived (representations of mobility) and imagined (representational spaces) realms of mobility, thus opening a space for the negotiation of the cultural knowledge about space, time, and movement that constitutes the cultural aspects of hypermobility. Less constrained by realist modes of representing motion, SFTV is able to imagine new forms of transportation and communication that, while rooted in real-world mobility technologies, open up possibilities for new ways of understanding these technologies and their potentialities.

Of course, there is the question of why I have chosen to focus exclusively on SFTV. After all, there are no doubt plentiful examples of SF film and literature that provide an equally insightful look at the production of hypermobility. There are two main reasons for my choice of focus. First, more so than SF in these other mediums, SFTV sits in a particularly close proximity to the technological means of hypermobility production. As I will argue in the first chapter, digital television became one of the central media technologies indicated in the production of hypermobility. Thus, by focusing on SFTV, I am able to pay particular attention to the way in which SFTV reflects on its own embeddedness within the media environments constitutive of hypermobility. Secondly, the narrative form of television, with stories that gradually extend

[56] Henri LeFebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Cambridge, MA and Oxford: Blackwell, 1991), 33.
[57] Harvey, 221.

over multiple episodes and seasons, lends itself to more thorough world-building than do other media. SFTV can, then, in more fully fleshing out its imaginative worlds, work to produce a more complex and intricate picture of the political-economic and social processes and power-structures that are implicated in the production of hypermobility.

In 90s SFTV, we find a particularly notable focus on technologies that allow characters to traverse vast distances at speeds faster than the speed of light. For example, the ubiquity of wormholes – quantum bridges between two points in space that eliminate the regular physical distance between these points – in 90s SFTV provided for the imagining of radically new modes of mobility in which present barriers of space and time are annihilated, allowing for near-instantaneous travel between points in space. I contend that these imaginative technologies provide a way for these series to think through the real-world development of hypermobility technologies.

It is also important to note here that there is a significant connection between genre and technology and that grasping this connection is crucial for understanding the concurrent development of the SFTV genre and televisual technology. The development of genres are inseparable from the development of the technological mediums out of which they emerge. As Toby Miller suggests, "[j]ust as the expansion of printing and literacy held implications for the emergence of the novel, so the spread of TiVo and technological familiarity influence the mixed genres of latter-day TV."[58] Indeed, I would suggest that changes in televisual technology taking place in the 90s can help to explain the increasing popularity of SFTV during the period. While the SFTV of previous decades, including series like the original *Star Trek* and *Battlestar*

[58] Toby Miller, *Television Studies: The Basics* (London and New York: Routledge, 2010), 83.

Galactica, enjoyed a cult following, the SFTV of the 90s accomplished a more widespread popular appeal.[59] This growing mainstreaming of SFTV prefigured the near full acceptance of SFTV in the 2000s with series like *Lost* and *Battlestar Galactica* becoming widespread cultural phenomena. The development of digital television, in particular, helps to explain the success of SFTV as the increased visual and aural quality of digital television signals lent themselves well to the relatively advanced special effects and CGI employed by the SFTV of the 90s. Moreover, the increased bandwidth offered by digital television opened space for more television channels, many of which would focus specifically on one genre. The Sci Fi Channel, which launched in 1992, was one such network and would serve as a space for the introduction of classic and new SF series to an expanded audience.

Beyond these relationships between the development of SFTV and televisual technology, I would also suggest that the connections I draw between the imaginative forms of mobility in series like *SG-1* and *TNG* and the transformations in mobility effected by new digital media technologies during the period may point to why these series gained a popularity unattainable by early SFTV. SFTV in the 90s began to provide a space where audiences could find the changes they were experiencing in their own lives due to transformations in space, time, and movement cast into a relief that helped them better conceptualize these changes and negotiate their own place in a hypermobile world. Thus, the majority of the series I have chosen to focus on in this dissertation are those that achieved a relatively wide audience appeal and a

[59] On the increasing popularity and commercial success of SFTV in the 90s, see Lincoln Geraghty, *American Science Fiction Film and Television* (Oxford and New York: Berg, 2009), 96-97 and Nader Elhefnawy, "The Golden Age of Science Fiction Television: Looking Back at SFTV During the Long 1990s," *The Internet Review of Science Fiction* (June 2017), http://www.irosf.com/q/zine/article/10421.

notable level of commercial success. The popularity of these series points to the broader relevance they have for understanding the dominant themes in the cultural discourse around hypermobility. The one exception here is the short-run series *VR5* that I explore in chapter 2. Despite its lack of popular success, I have decided to include it in my archive for two main reasons. First, the series points to a recognition of cultural fascination with and anxiety over the emergence of VR technologies. Second, *VR5*'s lack of success compared to *TNG*, the other text on which I focus in the chapter, point to the ways in which its more nuanced and less optimistic representations of VR technologies highlight a general reluctance to embrace the less utopian notions that were beginning to circulate in the cultural discourse around VR.

A Cultural Studies Approach

I envision my project in this dissertation as one firmly rooted in the tradition of cultural studies. From its earliest moments, cultural studies has insisted on the importance of looking to cultural practices and texts to better understand social, political-economic, and technological shifts and the role that culture plays in how people experience and come to terms with these shifts. I also draw on the interdisciplinary approach of cultural studies, working between the fields of media studies, science fiction studies, social and cultural theory, and mobility studies, among other fields and disciplines, in order to bring the unique insights of each to bear on the others. In so doing, I hope to provide a multi-dimensional conceptualization of the phenomenon of hypermobility.

The work of cultural studies scholars like Raymond Williams, David Morley,[60] Toby Miller,[61] and Anna Cristina Pertierra and Graeme Turner[62] has extensively focused on the role of television in the production of space-time and mobility at domestic, national, and global scales, and I seek in this project to expand on this work to conceptualize the role of SFTV in the production of hypermobility in the 1990s. I am particularly influenced by Miller's call for an interdisciplinary and multidimensional approach to the study of television. Critiquing earlier approaches to television studies that focused exclusively on content, audiences, or political economy, Miller proposes a new approach that recognizes the complexity of the overlapping spheres involved in the production, circulation, and reception of televisual programming:

> The life of any TV text is a passage across space and time, a life remade again and again by institutions, discourses, and practices of distribution and reception – in short, all the shifts and shocks of a commodity. To understand a program or genre we require an amalgam of interviewing people involved in production and circulation, from writers and editors to critics and audiences; content and textual analyses of shows over time, and of especially significant episodes; interpretations of knowledge about the social issues touched on; and an account of programs' national and international political economy.[63]

While the necessarily limited scope of my project means that I do not engage in all of these methods – I have not, for example, undertaken any kind of audience ethnography – I nevertheless strive in what follows to undertake an analysis that links the texts of SFTV with shifts in political economy and the spheres of distribution and consumption as well as the discursive regimes of which they become part. It is in these overlapping spheres that the lives of

[60] David Morley, *Family Television: Cultural Power and Domestic Leisure* (New York and London: Routledge, 1998) and *Home Territories.*
[61] Toby Miller, *Cultural Citizenship: Cosmopolitanism, Consumerism, and Television in a Neoliberal Age* (Philadelphia: Temple University Press, 2007.
[62] Anna Cristina Pertierra and Graeme Turner, *Locating Television: Zones of Consumption* (London and New York: Routledge, 2013).
[63] Miller, *Television Studies*, 148.

the SFTV texts I am interested in – as commodities as well as artefacts of cultural knowledge and terrains of ideological conflict – comes most fully into relief.

The historical approach of this project is also heavily influenced by the historical materialism of Walter Benjamin. For Benjamin, a historical materialist approach to doing history necessitates an understanding of a state of crisis not as an exception but as the historical norm.[64] In this project, I aim to uncover the perpetual state of crisis that has constituted hypermobility, even as I highlight the points at which this state of crisis becomes exceptionally visible. I also take from Benjamin a fascination with the utopian longings crystalized within everyday cultural objects, in my case the texts of 90s SFTV. As Angela McRobbie writes of Benjamin's importance for Cultural Studies, Benjamin's historical method enabled him to "to recognize some of those utopian elements which existed alongside, but were not as yet wholly taken over by, consumer capitalism…impulses which gave Benjamin some hope that through the object and the commodity form there could be expressed wishes and ideals other than those merely of acquisition, wealth and private property."[65] While throughout this dissertation, I frequently critique the tendency of SFTV texts to replicate the dominant ideological framings of hypermobility, I also aim to uncover their utopian elements that express desires reaching beyond these ideological constraints.

My project is implicitly informed by a SF studies approach to understanding the genre in terms of its response to its specific historical situation and its unique opportunities for engagement with questions of social power. Much of this rests, as I have explained above, on

[64] Walter Benjamin, *Illuminations*, trans. Harry Zohn, ed. Hannah Arendt (New York: Schocken Books, 2007), 257.
[65] Angela McRobbie, "The Place of Walter Benjamin in Cultural Studies," in *The Cultural Studies Reader*, ed. Simon During (London and New York: Routledge, 1999), 93.

the concept of estrangement, the idea that SF allows for a defamiliarization of the reader/viewer's present reality, presenting it to them as something strange yet recognizable. While SF studies has been attuned to how SF engages with issues of technological change, it has less often considered SF's relationship to media technologies specifically. Part of what I am trying to do with this project is to demonstrate the particular insights that SF studies can gain by examining the ways in which SF engages with shifts in media technologies and their place in broader social and cultural developments. Moreover, while there has been an increase in attention to television in SF studies in recent years, most of this work has been focused on the analysis of specific series.[66] My goal here, in contrast, is to theorize 90s SFTV as an interconnected discursive network that emerges out of a specific constellation of technological and political-economic conditions.

In bringing the insights of the "mobility turn" to bear on the analysis of media technologies and texts, I also aim to demonstrate the usefulness for media studies of foregrounding mobility in its explorations of the technological and social contexts of new media technologies. Here, I follow in the footsteps of scholars like David Morley[67] and Lynn Spigel[68] who have examined the ways in which media technologies work to produce new experiences and practices of mobility.

[66] One notable exception here is Jan Johnson-Smith's *American Science Fiction Television*, which provides a thorough analysis of some of the key themes explored in US SFTV in the latter half of the 20th century. Jan Johnson-Smith, *American Science Fiction Television:* Star Trek*,* Stargate *and Beyond* (New York and London: I.B. Tauris, 2005).

[67] Morley, *Home Territories*

[68] Lynn Spigel, *Make Room for TV: Television and the Family Ideal in Postwar America* (Chicago and London: The University of Chicago Press, 1992)

Chapter Outline

Each body chapter focuses on a particular trope or theme prevalent in 90s SFTV and connects these tropes to the production of hypermobility at a particular scale and through a particular media technology. Chapter 1, "Wormhole X-Treme!" explores the prevalence of wormhole travel in 90s SFTV, focusing specifically on *SG-1* and examining how the series' imaginative vision of wormhole travel gives us an insight into digital television's role in the process of time-space compression within late global capitalism. I argue that *SG-1*, to an extent, highlights the emerging hegemony of neoconservatism in that it attempts to reterritorialize the threat presented by intensifying time-space compression through a vision of a world in which US geopolitical and technological dominance ensures security in the face of these threats. The threat of Japanese technological ascendency is key here as it central in both the development of digital television and the techno-orientalist imaginary operative in *SG-1*. Despite a general capitulation to a neoconservative worldview, *SG-1*'s imagining of the geopolitical space in which wormhole travel technology operates at times opens onto more subversive visions of a hypermobile world that would largely be cut off from the public imagination after the 9/11 attacks.

Chapter 2, "Virtually Mobile" focuses on the production of hypermobility via virtual reality (VR) technologies. Just as digital television provoked an anxiety around the destabilization of national borders, VR engendered an anxiety around the destabilization of the borders of the (dis)embodied subject. While VR appeared prominently in cyberpunk literature, films, and television in the 80's, there was a marked representational gap between the immersive VR technologies imagined in these texts and the primarily text-based cyberspace

ecology on which they were based. The 90s, however, saw the introduction of technologies that attempted to create immersive visual VR environments in a way that bore a more immediate resemblance to the imaginative VR technologies of SFTV. In my readings of *VR5* and 'holodeck'-centric episodes of *TNG*, I examine how these series negotiated a set of tensions generated by the increasingly virtual nature of mobility production: tensions between an ideological erasure of the physical body – specifically the raced and gendered body – and a marked anxiety over the threats to this body that occur when the borders between the virtual and "real" world break down, as well as tensions between the utopian and ludic impulses invested in VR technology and the instrumentalization of these technologies in the service of global capitalism. While *TNG* tends to resolve these tensions through its narrative closures in a way that reconsolidates the physical mastery of a reconfigured liberal humanist subject over digital space, in *VR5* such efforts at mastery are often thwarted as the subject is caught within the increasingly inhospitable contours of cyberspace and networks of transnational control.

Chapter 3, "*Star Trek* Family Values" takes up the question of what I term the "hypermobile family," exploring how the discourse around Internet technologies and the threats they posed to the heteronormative family converged with the sudden centrality of the family in the new entries of the Star Trek franchise, *TNG* and *DS9*. I argue that this shift in the *ST* franchise towards a centering of biological and metaphorical families can be understood as a response to the growing popularity of the networked home computer and the hegemonic nexus of neoconservative and neoliberal ideologies in the US within which these technologies were understood. Reading *TNG* and *DS9* in this way highlights the constitutive tensions and contradictions within a dominant ideology that embraced the free flow of capital aided by new

media technologies while simultaneously resisting the deterritorializing force of these technologies through promoting a national morality based around heteropatriarchal "family values." In *TNG*, there is a notable tension between, on one hand, a normativizing of the biological nuclear family as the proper subject of hypermobility, and on the other, an opening to a utopian vision of "elective kinship" in which the hypermobile family is an expansive and self-selected one, breaking beyond the constraints of heteronormativity. The nexus of geopolitical conflict, wormhole travel, and nuclear family units in *DS9*, on the other hand, renders palpable (though not uncritically) a uniquely neoconservative re-imagining of hypermobility and the divisions of private and public space, one in which faith is placed in the heteronormative family's capacity to transform the morality of a threatening public space via hypermobility technologies.

Finally, in my conclusion, I consider the importance of this project at the current historical conjuncture. I suggest that recent events bespeak a particular crisis in hypermobility. Political instability, environmental destruction, and widening economic inequality on a global scale have produced waves of involuntary movement across borders, and right-wing forces across Europe and the US have emerged in response to the perceived threat posed by the forced mobility of these bodies. I examine briefly how the shifts in the production of hypermobility since 9/11 leading up to the current crisis have been understood and negotiated within the SFTV that has emerged since then. However, rather than understanding this crisis as an exceptional state for the production of hypermobility under late global capitalism, I suggest that this crisis has always existed in the tensions and contradictions of hypermobility. Drawing on Walter Benjamin's philosophy of history, I also suggest that the history of the recent past I

embark on in this dissertation can help us to better understand the contours and dynamics of the present conditions of hypermobility and to seize upon moments of potentiality that point toward possibilities for a democratic and socialist form of hypermobility.

Chapter 1

Wormhole Xtreme! Digital Television and Hypermobility

In a season 5 episode of the long-running 90s SFTV series *Stargate SG-1*, Martin Lloyd, an alien who had ended up stranded on earth in an earlier episode with knowledge of the Stargate program – a top-secret military program operating a wormhole-travel device known as a "stargate" – manages to produce a popular television series called *Wormhole Xtreme!* based on his knowledge of the program. The series, in which a military team travels through a wormhole device on mission to alien planets, clearly corresponds to the actual adventures of the characters in *SG-1* and the characters themselves are thinly veiled reproductions of *SG-1*'s main characters, to the extent that they are used to self-reflexively poke fun at the characters and the sometimes clichéd way in which they are written. In response to the production of *Wormhole Xtreme!* the Air Force decides to, in the interest of "plausible deniability," have a representative from the program serve as an advisor on the series. Beyond simply providing an amusing instance of postmodern self-reflexive parody, *Wormhole Xtreme!* illuminates a striking pre-occupation in 90s SFTV. Both the title of the in-world series and the importance of wormhole-travel technology to the narrative context framing its introduction speaks to the broader fascination of 90s SFTV with wormholes and the technologies that allowed characters to travel through them.

To understand the fascination with wormholes in 90s SFTV, it is perhaps important first to place it within the historical context of the science fiction (SF) genre. From its emergence as

a cultural genre, SF has been preoccupied with the technological production of mobility, particularly with modes of travel that exceed the capacity of the technologies of their historical moment. The titular machine of H.G. Wells *Time Machine*, for example, allowed its passenger to travel through time uninhibited by the constraints of linear time, while the submarine in Jules Vernes' *2000 Leagues Under the Sea* enabled humans to move through the (at the time) unreachable depths of the ocean.[1] These fictional technologies of mobility were more than simply creative whimsy, however. They were created from the raw material provided by existing mobility technologies and the new possibilities and unfulfilled needs they helped produce. Thus, paying attention to these SF creations can provide a unique window onto the dominant forms of mobility and space-time configurations of the historical moment out of which they emerged. That is, they help us to grasp how space and time were subjectively experienced as well as how new technologies and the social, political, and economic milieu in which they operated worked to produce new forms of mobility.

In the 90's, a particularly interesting mobility technology emerged in network and cable SFTV: wormholes.[2] Wormholes and technologies that enabled characters to create and travel through them became a central figure in most of the major SFTV series of the period (or at least those involving space travel). More than simply serving as an occasional plot point, wormholes

[1] Interestingly, there is a lack of work within SF studies that specifically foregrounds an analysis of mobility and mobility technologies within SF texts. While there is some work examining mobility in relationship to specific SF texts, there do not appear to be any sustained engagements with the relationship between the history of mobility technologies and SF. For some examples of the former, see Matthew B. Hill, "'I Am a Leaf on the Wind': Cultural Trauma and Mobility in Joss Whedon's Firefly," *Extrapolation* 50, no. 3 (2009) and David T. Fortin, *Architecture and Science Fiction Film: Phillip K. Dick and the Spectacle of Home* (Surrey and Burlington, VT: Ashgate, 2011), 139-68.

[2] While wormholes only became a dominant trope in SFTV in the 90s, they first appeared in the SF genre a couple of decades earlier. In *The Historical Dictionary of Science Fiction Literature*, Brian Stableford notes that wormholes first appeared in SF literature in the 1970s when the concept emerged from scientific research into black holes. Brian Stableford, *The Historical Dictionary of Science Fiction Literature* (Lanham, MD: Scarecrow Press, 2004), 397-98.

in these series were pivotal to the narrative development of the series and the construction of their diegetic universes. Notably, wormholes rarely appeared in US SFTV prior to 90s. That they suddenly became a central trope during a period of rapid development in mobility technologies – and in particular digital media technologies that enabled new forms of virtual mobility – suggests there is some significance to this historical articulation. What I want to suggest here is that as wormholes became the dominant technology of hypermobility in the imaginative universes of 90s SFTV, they took part in the broader discursive production of hypermobility as a cultural force.

Exceeding the physical limitations on the speed and range of space travel – specifically developing the ability to travel at speeds faster than light (FTL) – through technological innovation has of course long been a preoccupation of SFTV. The wormhole, however, signaled an entirely new conceptualization of space-time and the way in which humans traversed it. Perhaps one of the most famous forms of FTL travel in SFTV is the "warp drive" introduced in the original *Star Trek* (*TOS*), which allowed the crew of the *Enterprise* to travel at speeds up to 9 times the speed of light. The warp drive operated through producing localized distortions, or warps, in space-time, in effect bending space-time around the ship. While based in an Einsteinian paradigm of space-time relativity, the warp drive still operated within a generally linear model of space travel; while space-time was locally malleable, the ship and its location were still conceived of as separated by a tangible distance that had to be traversed. The wormhole in 90s SFTV engaged a different understanding of space-time and mobility in which space-time was seen in quantum and non-linear terms. A quantum conceptualization of space-time and mobility entailed a rejection of Newtonian view of a mechanized universe in which

space, time, and movement were measurable and predictable constants and instead an embrace of the indeterminacy of these concepts within a cosmological model of randomness and the malleability of space-time. Instead of localized warping of space-time, wormholes operate through the quantum entanglement of matter, creating an instantaneous link between two points in space. Thus, rather than operating within a framework of hypermobility as a process of acceleration of travel, wormholes invoke hypermobility as instantaneity, the annihilation of the traditional boundaries of space and time. In other words, it is no longer about travelling increasingly faster between two points, but rather about occupying two points (almost) simultaneously.

This new form of hypermobility emerging in the imagined universes of 90s SFTV corresponded with an analogous shift in the production of space-time and new forms of mobility within global capitalism occurring in the 90s. No longer able to accommodate perpetual accumulation through spatial expansion, as it had historically done, capitalism turned to an increasingly efficient colonization of time. The speeding up of global production and consumption, the rise of what David Harvey has termed flexible accumulation, and the emergence of new forms of digital media all contributed to a new form of mobility in which capital and information traveled instantaneously from point to point. The disjuncture between this instantaneous movement and the relatively slow-paced movement of physical bodies created a desire for new modes of virtual travel enabled by digital media – including digital television, virtual reality technologies, and the Internet – that overcame the limitations of physical travel. With these new modes of instantaneous travel, hypermobility came to supplant modern forms of mobility within an emergent configuration of space and time. The speeding up

and spatial expansion produced by the transition from analog to digital media were part of a broader operation of what Harvey has termed "time-space compression"[3] that produced major effects in the global economic and social order, changes that were registered in the fictional worlds of SFTV affected by wormhole travel. Harvey identifies two historical moments of intensifying time-space compression: one corresponding with modernity and Fordism and the second with "postmodernity" and flexible accumulation. It is his analysis of this second moment that is particularly useful for understanding the transition to hypermobility in digital media and 90s SFTV. For Harvey, postmodernity was characterized by "an intense phase of time-space compression that has had a disorienting and disruptive impact upon political-economic practices, the balance of class power, as well as upon cultural and social life."[4] This new phase of time-space compression also instituted instantaneity and disposability as central values in commodity and cultural production, a break from modern values provoking a broad sense of insecurity and instability.[5] These disruptive and anxiety-inducing effects of time-space compression within late capitalism are rendered particularly evident in the geopolitical response to the rise of digital media technologies as well as within the universes of 90s SFTV.

As both a product of the new media forms propelling hypermobility and a discursive space for the processing of their impact, SFTV rendered this new mode of mobility apparent in its fictional worlds, with the wormhole playing a central role. Just as digital television and the Internet allowed users to travel instantly via digital signals traveling at light speed along a global

[3] David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Oxford: Blackwell, 1990).
[4] Ibid. 284.
[5] Ibid.

network of fiber-optic cables, wormhole technologies enabled the characters in SFTV to traverse the known universe without the limitations of traditional configurations of space-time. Like the wormhole with its enabling of hypermobility in a universe of intensifying space-time compression, digital television promised to exceed the spatial and temporal restraints on physical mobility, providing a high definition sensory experience of accelerating global flows. Wormhole travel in series like *SG-1* mirrored the television viewer's new journeys through global televisual networks. Thus, the narratives and imagery of 90s SFTV in which wormholes were integral provided a representative space for the interplay of the hopes and fears around these new media technologies.

As with any major shift in space-time and mobility, the newly-founded dominance of hypermobility in the 90s produced a disturbance in the social order, generating both anxiety about the impact of hypermobility on traditional structures such as the nation-state and the family and utopian hopes concerning the new forms these structures might take in a hypermobile world. The force of this disturbance and the resulting tensions between framings of the disturbance as threat or promise was on full display in SFTV worlds in which characters grappled with the social, political, and economic implications of wormhole travel. The trope of wormhole travel in SFTV thus served as a device for thinking about the changes wrought by digital media technologies and the broader shift towards hypermobility. While the wormhole operates as a signifier of the multiple new forms of digital media and the hypermobility they produced, it is perhaps most productive to think about the wormhole alongside the specific form of digital television. Both wormhole travel and digital television were intensely visual experiences involving near-instantaneous travel between remote worlds. Just as the digital

television viewer could travel at light-speed – which, within the relatively geographically compact space of the Earth, produced an illusion of instantaneity – via fiber-optic cable to the real and fictional worlds found among hundreds of discrete channels, the characters in series like *SG-1* and *Babylon 5* could travel to any one of thousands of alien planets in the blink of an eye with the help of the wormhole.

This chapter, then, tells two interconnected stories. One is about the emergence of digital television and the geopolitical and economic context in which it developed. The other is about the employment of the trope of wormhole travel in SFTV during this same period. Together, these two stories help to illuminate both the material and discursive shifts involved in the transition to hypermobility as the new dominant form of mobility in the 90s. The first section of this chapter will draw on work in television/media studies and cultural geography to situate the development of digital television within the specific social, economic, and geopolitical context of the United States in the 90s, highlighting the role that social and geopolitical anxieties in the US following the end of the Cold War played in the emergence of digital television technology. I then examine how these developments were registered and discursively constructed through the figure of the wormhole and technologies of wormhole travel in 90s SFTV. In the second part of the chapter, I turn to a reading of *SG-1* to demonstrate some of the specific ways in which the trope of wormhole travel operated as a site of discursive production of ideas about the promises and threats of hypermobility technologies within the particular ideological landscape of the US in the 90s.

The Emergence of Digital Television

The 90s were punctuated by a series of milestones in the development of a national digital television infrastructure. In 1990, the US electrical firm General Instrument succeeded in using digital compression to transmit a high definition (HD) as well as multiple standard definition (SD) signals over a 6hz cable channel,[6] marking the beginnings of a transition in televisual technology from an analog transmission model to digital broadcasting, a transition that would occur rapidly over the next decade (and into the 2000s). In 1994, DirecTV launched the first digital satellite network[7] and cable quickly followed suit, with most major cable providers offering digital service by the end of the decade, and in 1996 the CBS affiliate in Raleigh, North Carolina became the first over-the-air broadcast station to make the digital transition.[8]

These developments marked a substantial rupture in the mediated production of space-time, one that was pivotal in enabling the emergence of hypermobility as a mode of mobility production. Crucial here was the extent to which advancements in digital television technology effected a dramatic acceleration in the movement of visual-auditory signals. While digital television was not developed specifically for the purpose of increasing the speed of signal transmission – as I discuss below, the primary concern was enhanced picture quality – it nevertheless had a significant effect in the speeding up of televisual transmission and contributed to a general speeding up of media produced by digitization. As Scott Lash argues,

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[6] Rich Warren, "General Instrument's HDTV System Could be a Winner," *Chicago Tribune*, June 22, 1990.
[7] "1994, DirecTV is Born," *GM Heritage Center*, accessed October 15, 2015, https://history.gmheritagecenter.com/wiki/index.php/1994,_DirecTV_is_Born.
[8] "History of WRAL Digital," *Wral.com*, last modified July 14, 2014, http://www.wral.com/history-of-wral-digital/1069461.

digital media technologies have created a profound shift in conceptualizations of space and time within late capitalism. Lash notes "speeding-up" as the most significant characteristic of this shift. Beyond a simple intensification in speed of transmission, speeding-up has involved a transition from a linear and continuous view of space and time to a non-linear and discontinuous one. As he suggests, "[f]orms of life are so stretched out in the age of technology that the linearity of roads and lines is no longer long enough. Hence, communications are increasingly via non-linear and discontinuous 'ports'."[9] The notion of communication via "non-linear and discontinuous 'ports'" seems a particularly apt description of both wormholes, which function through opening non-linear ports between two distant points, and digital television, which unlike analog broadcast television that operated through a linear dissemination of signals from a central hub to a limited geographical area was built on a digital ecosystem of discontinuous point-to-point transmission. If analog television mimicked the spatial orientation of the modern urban center with its bounded geographical reach and linear spatial organization, digital television was modeled on the imagined geography of cyberspace that rendered spatial distance irrelevant and flattened the digital world into a discontinuous network of information flows.

While the process of speeding-up Lash identifies in the digitization of media might seem to indicate a world in which physical space becomes irrelevant, supplanted by a flat and discontinuous cyberspace, physical space has persistently continued to play an important part in producing the geography of late capitalism. As Manuel Castells suggests, the emergence of cyberspace has not so much eliminated the significance of physical space as it has generated

[9] Scott Lash, "Technological Forms of Life," *Theory, Culture & Society* 18, no. 1 (2001): 112.

new articulations between the "space of places" and the "space of flows."[10] This insight is particularly useful in understanding the circumstances around the emergence of digital television. Although the technological infrastructure of digital television produced transmission speeds that could render the bounded geographical space of the nation-state obsolete, the "imagined community"[11] of the nation and geopolitical relationships between national entities played a crucial role in the development of this technology.

The political, social, and economic context out of which digital television emerged in the US was one profoundly shaped by the end of the Cold War and the new geopolitical landscape forming in which the place of the United States was less certain than it had been during the Cold War. As Phillip Wegner has argued, the 90s marked a strange transitional period between the end of the Cold War and the 9/11 attacks, what he terms a "time between two deaths."[12] The development of digital television and other experiments with media technologies in the 90s should thus be seen as occurring within a national climate of uncertainty in which the US struggled to establish its place in a radically changing world. The development of digital television technology in the US was a direct outcome of attempts to establish a national standard for HDTV broadcasting. Prior to the creation of the DTV standard for broadcasting, cable, and satellite, the Japanese analog HDTV system MUSE stood poised to become the global standard. Thus, international competition played a significant part in the emergence of digital television. Facing a sort of identity crisis in the post-Cold War world, the US looked to establish

[10] Manuel Castells, *The Rise of the Network Society* (Oxford: Blackwell, 1996), 423-38.
[11] Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London and New York: Verso, 1983).
[12] Phillip Wegner, *Life Between two Deaths, 1989-2001: US Culture in the Long Nineties* (Durham, NC: Duke University Press, 2009).

a position of technological superiority to the tech-fueled economies of eastern Asia, particularly Japan. Conservative techno-utopians like George Gilder stressed the importance of the US taking the lead in digital television, warning that a failure to do so could lead to a Japanese-dominated world.[13] While in reality Japan was suffering a deep economic recession at the time and didn't have the resources to even improve on the already antiquated MUSE system, the threat of Japanese ascendency easily played into techno-Orientalist fears. As David Morley and Kevin Robbins argue, Japanese ascendency in technology and media threatened to upend the historical Orientalist imagining of Japan as an exotic pre-modern space.[14] With Japanese companies like Sony and Mitsubishi increasingly controlling capital in US entertainment and technology markets, a new vision emerged of Japan as a ruthlessly mechanical and disciplined culture threatening the hegemony of the liberal democratic US. With its geopolitical hegemony in question and without the presence of an "evil empire" against which it could present itself as savior and protector, the development of a superior HDTV standard (along with other advancements in consumer electronics and media technologies) provided one important opportunity for the US to forge a new role in the global economy as a media-technological superpower. Techno-Orientalist representational strategies also worked to deflect critiques of late capitalism and its exploitation of labor in the United States through portraying Japan as embodying the most oppressive and dehumanizing tendencies of capitalism. As Morley and Robbins argue, the Japanese are, within a US techno-orientalist discourse, "now increasingly

[13] William Boddy, *New Media and Popular Imagination: Launching Radio, Television, and Digital Media in the United States* (Oxford: Oxford University Press, 2004).
[14] David Morley and Kevin Robins, *Spaces of Identity: Global Media, Electronic Landscapes, and Cultural Boundaries* (London and New York: Routledge, 1995), 159-60.

seen as workaholics, as 'economic animals' under the governance of a 'Japan Inc.' pursuing GNP growth at the expense of everything else, spreading pollution and spawning intimidating futuristic megalopolises."[15] The destruction and material oppression of capitalism are thereby displaced through the designation of these tendencies as a product of Japanese culture and inimical to the democratic and liberal values of the US. In the case of digital television, such a displacement neatly elides the exploitation of foreign labor – particularly that of *maquilladora* workers in Mexico where the majority of television sets and peripheral equipment was (and continues to be) produced – carried out by both US and Japanese corporations in the production of digital television equipment.

Thus, there is a paradox implicit in the development of digital television. On one hand, the near-instantaneous speed at which digital television signals traversed the globe through a seamless fiber-optic and satellite network rendered national borders increasingly obsolete. With viewers able to access a global flow of images with the push of a button, national citizenship seemed at least to some extent subservient to belonging in an emerging global community. The form of this belonging, of course, was heavily mediated by the position of viewers within power structures of class, race, gender, and sexuality, and in general their inclusion within a global community was negotiated in specific ways through these structures. There nevertheless appears a general tendency here towards increasing contact and negotiation between global and local forces, communities, and identity positions. However, at the same time, the developments in digital television and other digital hypermobility technologies provoked increasing competition between nation-states and a drive to consolidate

[15] Morley and Robbins, 154

national identity. As David Morley notes, television – despite its global reach – continues to fulfill the symbolic role of purifying the domestic space and consolidating a sense of belonging to a national community.[16] The emergence of digital television as a crucial technology in the production of hypermobility, then, was not a linear development of unimpeded global expansion but a dialectical and fraught process in which new and old social forms came into conflict, each shaping the other.

There are several tensions that emerge in this development of digital television. Two inter-related tensions that become particularly manifest are those between stasis and mobility and between virtual and physical mobility. In producing an updated form of "privatized mobility,"[17] digital television heightened tensions between the stasis of television viewers within the safety of domestic space and the virtual mobility they could experience via the global digital networks of new televisual technologies. Moreover, as I have argued, hypermobility is predicated on an insurmountable gap between virtual or digital mobility and physical mobility. With digital television, the ability of viewers to travel virtually to spaces across the globe instantly stands in tension with the networks of physical mobility within which these viewers are located that offer a significantly proscribed and slow-speed freedom of movement. Finally, as we see in the response of the US to the technological ascendency of Japan, there is a marked tension between the network of deterritorialized global flows of digital information and the reterritorialization of geopolitical boundaries. These same tensions between stasis and mobility, virtual and physical mobility, and the national and global that shaped the articulation

[16] David Morley, *Home Territories: Media, Mobility and Identity* (London and New York: Routledge, 2000), 3.
[17] Raymond Williams, *Television: Technology and Cultural Form*, ed. Ederyn Williams (London: Routledge, 2005).

of digital television within late global capitalism are given representational form in the fictional universes built around the ubiquity of wormhole technology in 90s SFTV. And, while in many instances these universes worked to stabilize these tensions in ways that reconsolidated the hegemonic political and economic forces of the era, they also at times exploited these tensions to offer glimpses of pathways to alternative futures outside the confines of global capitalism and US geopolitical domination. As Wegner argues, the liminality of the 90s as an historical era also made it one ripe with potentiality, opening up a space of contestation in thinking about the future, a space which arguably closed to a large extent following 9/11, as the 9/11 attacks and the ensuing "war on terror" closed off more utopian lines of possibility as images of threats to US hegemony gained ideological purchase.[18] As I will argue throughout this dissertation, these battles over imagining future possibilities are deeply intertwined with ideas about media technologies. If the major political and economic mechanisms in the development of digital television were driven by the desire to reconsolidate US hegemony internationally, the discursive construction of this technology in SFTV opened up a more ambivalent and contested field of possibility. The employment of the wormhole trope in SFTV highlighted the tension between the hopes and fears surrounding new technologies. Wormhole travel, like digital television and other hypermobility technologies, enabled new forms of social organization but also threatened the stability of established social, cultural, and political borders. In the more techno-utopian neoliberal and conservative discourse of the 90s, digital television was claimed as part of a complex of communication technologies ushering in a new neoliberal democratic global order. However, one argument that I will suggest in my reading of *SG-1* is that the

[18] Wegner, 1.

tension between utopian and dystopian imaginaries of hypermobility technologies in SFTV could occasionally open onto somewhat more utopian potentialities that are not entirely contained within neoliberal and neoconservative ideological framings.

In juxtaposing the preceding analysis of digital television's place in the production of hypermobility with a reading of wormhole technology in *SG-1*, I hope to illuminate the relationship between developments in digital media technologies and how SFTV grappled with making sense of these changes and their articulation within the shifting structures of global capitalism and a national anxiety about the role of the US in a "globalizing" world. Thus, in my discussions of *SG-1* in the following section, I am interested not only in the technologies of hypermobility themselves but also in the social, economic, and geopolitical world they enable. Within the US, cultural ideas about digital television and other media technologies are not simply ideas about these technologies as isolated entities, although such reification is not uncommon, but are deeply imbricated within broader ideological understandings about individuals, their place in broader social structures, and the past and future of their societies. People in the US often understand themselves through their media technologies and invest these technologies with their hopes and fears for the world. Thus, if we can see the technologies of hypermobility imagined within the diegetic universes of 90s SFTV as, at least to some extent, attempts to conceptualize, even theorize, the role of new media technologies in the production of hypermobility, the social worlds of these series are also involved in the production of ideas about how digital media was shaping and being shaped by the economic, social, and political conditions of the time.

Dialing the Digital in *Stargate SG-1*

SG-1 makes for a particularly useful case study in how the wormhole was employed as a trope of hypermobility in 90s SFTV. The series highlights the characteristics shared by the series in which wormhole technology played a central part. Wormhole travel fulfills a pivotal role in enabling the narrative progression, the diegetic universe registers the anxieties and hopes percolating in the US following the end of the Cold War, and there is a dialectical tension between the utopian and dystopian imaginaries invested in the discursive construction of hypermobility technologies. *SG-1* explicitly foregrounds the specific technology of wormhole travel – the titular stargate – and devotes more narrative space than other series to exploring the history and technical operations of this technology. It is also the only series set both in the US and in the present and as such the national ideological struggles with which it is engages are rendered less obscure than in other series. Perhaps most interesting, though, is the way in which it is structured by this ideological ambivalence but also, in its preoccupation with questions of military force and security, prefigures the post-9/11 national shift to the hegemony of neoconservatism. In this way, *SG-1* provides an instructive historical lesson in how the popular imagination of possibilities for a quite different digital future that emerged in the 90s was closed off by a neoconservative vision of a world in which the hypermobility of digital flows is kept in check by US military and cultural hegemony. In particular, the first three seasons of the series, on which I focus here, usefully highlight the intersection between anxieties surrounding hypermobility technologies and those centered on new foreign threats to US national security.

SG-1 premiered on Showtime in 1997 as a spin-off of Roland Emmerich's 1994 film *Stargate* in which an ancient device found in Egypt turns out to be a hyperspace gateway to an alien world. 4 years after the events of the film, the gate suddenly reactivates and a new enemy emerges. This enemy, Apophis, is part of an alien race known as the Goa'uld, snake-like creatures who parasitically inhabit human bodies and impersonate gods from (mostly) Egyptian mythology in order to amass a vast empire of human and alien-populated planets. The strength of the Goa'uld rests largely on their superior technology (most of which they have stolen from other races) and their armies of Jaffa, humanoids who have been biologically altered to serve as incubators for young Goa'uld larvae. In response to the re-opening of the stargate and the Goa'uld threat, a secret US Air Force program called Stargate Command (SGC) is established, based in the Cheyenne Mountain facility where the stargate is located, and led by General George Hammond. The SGC consists of multiple "SG teams" tasked with travelling through the gate to explore alien worlds, develop alliances, and acquire new technology. The narrative of the series focuses on the adventures of the flagship SG team SG-1, led by Colonel Jack O'Neil, who led the initial mission through the stargate in the film, and including anthropologist Dr. Daniel Jackson, the ancient Egyptian specialist whose translation efforts enabled the military to open the stargate in the film, as well as Captain Samantha Carter, a military astrophysicist with expert knowledge of the stargate, and Teal'c, a Jaffa formerly in the service of Apophis who has joined the SGC to help free his fellow Jaffa from Goa'uld enslavement.

SG-1 was, by all measures, a hugely successful series with consistently high ratings. The two-hour pilot gained Showtime's highest-ever ratings for a series premiere,[19] and the show

[19] Will Joyner, "Through a Gate to the Far Side of the Universe: A TV Series," *New York Times*, July 26, 1997.

continued to be the most watched series on the network for the first few seasons.[20] After moving to the Sci-Fi Channel, *SG-1* would also become that network's most watched original series.[21] With its cancellation following its 10th season, *SG-1* gained the distinction of being the longest-running SFTV series in the US.[22] Beyond *SG-1*'s run, it would also spawn an entire *Stargate* franchise, with two spin-off series, two direct-to-DVD films, an animated series, an expanded universe of novels and comics, and most recently, an official web series. Like the *Star Trek* franchise, *Stargate* engendered a large fandom community, with a website and national conventions. *SG-1*'s popularity – and the particular form this popularity took with its success on a genre-specific network and birth of a transmedia franchise – marks it as one of the first hit SFTV series of a newly-emerging digital media ecosystem, and it is thus instructive to understand the ways in which its imaginative representations of this ecosystem and the geopolitical power structures within which it emerged seemed to resonate with a broad audience.

The Stargate, Hypermobility, and Time-Space Compression

The incursion of the Goa'uld Apophis into the Cheyenne Mountain facility in the pilot episode activates the narrative development of the first three seasons of *SG-1*, which would center on the threat posed to the security of Earth by the Goa'uld, a threat provoked by Earth's entry into a frightening new geopolitical universe via the hypermobility technology of the

[20] Andy Meisler, "Television/Radio: Not Even Trying to Appeal to the Masses," *New York Times*, October 4, 1998.
[21] "SCI FI Channel Renews Stargate SG-1 for Eighth Season," *SciFi.com*, last modified July 23, 2003, https://web.archive.org/web/20070813043054/http://www.scifi.com/stargate/press/press_02.html
[22] Darren Sumner, "Smallville Bows This Week – With Stargate's World Record," *GateWorld*, last modified May 10, 2011, https://www.gateworld.net/news/2011/05/smallville-bows-this-week-with-stargates-world-record.

stargate. This event also brings into focus the key articulation between the *Stargate* universe's technological means of hypermobility production – the stargate itself – and a geopolitical context marked by the threat of foreign invasion, which maps quite neatly onto the articulation between emerging media technologies in the US and the twin Oriental threats of Japanese media-technological ascendency and Middle Eastern terrorism.

Let us turn first to the technological means of hypermobility production. The stargate is a device of ancient origin that opens up an artificially created wormhole between two points in space, allowing the user to travel immediately between these two points through breaking down their bodies into information as they enter and re-materializing them at the other end. The "gate" itself is a circular structure with hieroglyphic symbols or "chevrons" around it that must be "dialed" in a correct sequence to activate the gate and connect it to a specific address. Once activated, the wormhole opens and the event horizon becomes visible in the gate as a blue, plasma-like threshold.

The stargate functions as a complex signifying network that articulates the experience of time-space compression in late global capitalism with emerging digital media technologies. In this sense, it is a particularly powerful representation of hypermobility as a social-technological force. In terms of its technical infrastructure, the network of hyperspace gates enabling point-to-point information transfer, each identified by unique addresses, points to the specific characteristics of digital media ecosystems. This network infrastructure was crucial for the development of digital cable and satellite systems, which like Internet-connected computers, rely on a point-to-point connection between sender and receiver. While analog television, despite the theoretical ability of television receivers to both receive and transmit information,

operated under a broadcast, one-way transmission paradigm, the emphasis on the capability of digital television for two-way interactivity further suggests the possibility of seeing the stargate network as analogous to the spatial organization of digital television networks.

While the hyper-space network created by the stargate system mirrors the technical infrastructure of digital television networks, this was an infrastructure shared by many of the emerging media technologies of the period. Interestingly, the characters in *SG-1* frequently use a variety of consumer media technology metaphors to explain various phenomenon associated with the stargate, including metaphors referencing telephone, computers, television, and even radio. This ambiguity of the stargate in terms of its correspondence to specific media technologies is useful in understanding the blurring of boundaries between television and other forms of media effected by the emergence of digital television technology that would eventually come to be termed "convergence."

Perhaps the clearest correspondence between the stargate and digital television is that they are both highly visual technologies. *SG-1* frequently uses visual cues to emphasize both the journey through the stargate and the contrasts between the worlds on either side of the gate. The unearthly mise-en-scene of many of the alien worlds to which SG-1 travels showcases the radical otherness of these destinations, just as digital television offered its virtual tourists the opportunity to visually experience the alterity of spaces across the globe or galaxy. At other times, however, the visual resemblance of alien planets to earth produces a sense of uncanniness, rendering palpable the hyperreal qualities of virtual travel via digital networks. The sequences in which SG-1 travels through the gate are frequently concluded with wide-angle and overhead shots that capture the alien landscapes. These shots provide the viewer with a

sense of mastery over these spaces, playing into fantasies of dominance stoked by the expansive virtual reach of digital television. This visual mastery takes on particular significance when we consider that the viewer is following a team of US military personnel into foreign spaces heavily coded through (neo)colonial and Orientalist imagery, reminding us that, as I will argue below, hypermobility technologies are thoroughly shaped by the Eurocentric and colonial geopolitical power relations out of which they emerge.

The way in which the journey itself through the stargate is visualized in the series provides a particularly potent point of articulation between the diegetic imagining of the stargate as a technology of hypermobility and viewers' experience of digital television as an emerging hypermobility technology. In these sequences, hyper-space is represented through the use of abstract swirls and accelerating lines of multi-colored lights arranged into the outline of a tunnel. The viewer is given a first-person perspective of the journey as the "camera" jerks, spins, and zooms through the wormhole in an exhilarating and disorienting high-speed rollercoaster ride. These sequences serve as powerful representations of virtual movement through the non-linear networks of digital signals that constitute the physical and imaginary geographies of digital television and other digital media technologies. Interestingly, there is a particular ambivalence to these visual displays of hypermobility in that they evoke both a sense of exhilarating freedom and disorienting anxiety. The viewer is given a sense of vertigo and physical unease that is also shared by the characters who, particularly on their first journey, experience a moment of dizziness and disorientation upon completing the journey through the gate. These ambivalent affects produced through the series' visualization of gate travel convey the tension embedded in ways of thinking about digital television. While digital television

enabled utopian dreams of unrestricted virtual mobility, it also produced a profound anxiety over its potentially disruptive effects.

The stargate as a technology of hypermobility only takes on its full significance, however, in conjunction with anxieties surrounding the foreign threats to which the stargate opens earth. The time-space compression enabled by wormhole travel technology, at the same time as it creates a dizzying sense of excitement about the possibilities of hypermobility, also threatens to collapse the borders between previously separated species and cultures through the annihilation of linear distance as a barrier to travel. As the stargate creates a wormhole between two points, it provides an instantaneous short cut, essentially bringing these two points together and thus obliviating the actual physical distance between them, bringing the previously removed spaces into direct contact. Through opening a two-way portal between distant points, the stargate threatens to bring what was previously held at a safe distance directly into the heart of the once-inviolable domestic space. In *SG-1*, this threat presented by time-space compression and hypermobility is embodied by the Goa'uld and their threat to the security of Earth. Apophis, with his dark skin and impersonation of the Egyptian god of chaos, introduces the Goa'uld as a specific threat to Earth, one heavily coded in Orientalist imagery. Within the geopolitical context of the 90s, in which Japanese ascendency in media-technological development – manifested particularly as an incursion into the US domestic market – threatened the technological superiority and self-sufficiency of the United States and the growing threat of Middle Eastern terrorism – evidenced particularly in the 1993 WTC bombing and the attack in 2000 on the USS *Cole* – presented a new and incomprehensible threat to the security of the nation, the Goa'uld in *SG-1* functioned as a floating signifier of

Oriental danger, representing both the dehumanized technological proficiency of Japan and the irrational barbarism of Middle Eastern terrorism.

To a large extent, the Goa'uld in *SG-1* conform to traditional Orientalist representations, particularly as these representations have been re-articulated in constructions of Middle Eastern terrorism. *SG-1* makes use of an arsenal of images and references to associate the Goa'uld with Eastern, and particularly Egyptian, culture. The Goa'uld take on the names and personas of various gods from primarily Egyptian mythology, including Ra, Apophis, Hathor, and Anubis, amongst others and speak an ancient Egyptian dialect. These Goa'uld "gods" rest and are regenerated in sarcophagi that are replicates of those in which Egyptian pharaohs were buried, and Goa'uld transport and attack ships are in the shape of giant Egyptian pyramids. The association of the Goa'uld with *ancient* Egyptian culture also functions to reproduce what Johannes Fabian terms the "denial of coevalness," the understanding of the colonial Other as existing in a pre-modern historical past.[23] Furthermore, in their association of the Goa'uld with Middle Eastern culture, *SG-1* reproduces an array of Orientalist tropes that work to maintain the superiority of the SGC over the Goa'uld. As Edward Said notes, Orientalist discourse operates to construct an opposition between the Westerner and the Arab-Oriental, with the former characterized as "rational, peaceful, liberal, logical, capable of holding real values, without natural suspicion; the latter are none of these things."[24] In *SG-1*, we see this opposition fully operative in the contrast between the Goa'uld and the democratic, liberal and rational SGC. The Goa'uld are despotic, finding meaning only in the exercise of domination. The system

[23] Johannes Fabian, *Time and the Other: How Anthropology Makes Its Object* (New York: Columbia UP, 1983).
[24] Edward Said, *Orientalism* (New York: Random House, 1979), 49.

lords are incapable even of cooperating amongst one another, as we see in "Fair Game," as petty squabbling and competition between the system lords Nirrti, Yu, and Cronus repeatedly breaks down negotiations between the SGC, the Asgard, and the system lords to prevent an attack by the latter on Earth. The Goa'uld also demand conformity – they do not accept being questioned, as becomes clear in their attempts to eradicate the Tok'ra, the rebel Jaffa, and any other group that opposes them. Perhaps even more importantly, the Goa'uld are associated with religiousness – posing as gods and utilizing religious mythology – and irrationality as opposed to the secular rationality of the SGC (and by extension the US). *SG-1*'s deployment of these classic Orientalist tropes in its depiction of the Goa'uld resonates with a broader tendency in US culture to de-legitimize and epistemically contain Middle Eastern terrorism through its construction within Orientalist discourse. As Carl Boggs and Tom Pollard argue, this discursive construction has worked to create a new personality type that "exists beyond history, beyond politics, beyond psychology, a type so irredeemably evil and irrational that no normal mode of interpretation is possible."[25] In this way, the struggle against Middle Eastern terrorism is framed simply as a battle of good vs. evil or civilization vs. barbarism. *SG-1*'s Orientalist framing of the Goa'uld as an irrational and barbaric threat to the security of Earth thus places it within an emerging neoconservative discourse framing the fight against terrorism as a Manichean battle between US neoliberal democracy and an irredeemably nihilistic enemy.

This Orientalist imaginary also structures the narrative *SG-1* constructs about the historical development of the stargate system. While in the film upon which the series is based,

[25] Carl Boggs and Tom Pollard, "Hollywood and the Spectacle of Terrorism," *New Political Science* 28, no. 3 (2006): 350.

the viewer is led to believe that the Goa'uld created the stargate to transport human slaves, the series is quick to correct this assumption. Daniel suspects that the gate system was actually created by another alien race since the Goa'uld are "parasitic by nature." Part of the purpose behind SG-1's trip to the planet of Cimmeria in "Thor's Hammer" is precisely to seek proof that the Goa'uld were not the ones that created the stargate and to make contact with the race that did in order to forge an alliance against the Goa'uld. While it turns out that the Asgard – the race SG-1 was seeking out on the planet – did not create the gate system, the team later discovers that a race called the Ancients was responsible for the stargate technology. The Ancients are firmly established within a Western lineage, the artefacts of their culture clearly referencing Ancient Greece. Moreover, we learn that the Ancients are actually the ancestors of modern humans, creating them in their image and teaching them how to survive. The origin story constructed here for the technology of the stargate reaffirms a markedly Eurocentric narrative about the development of hypermobility technologies. The Goa'uld, associated with Ancient Egypt, are parasitic, incapable of developing their own technology. Furthermore, they use the technology they steal for the purposes of domination. The Ancients, on the other hand, are plotted within an idealized Western history that has frequently traced the cultural, political, and technological developments of modern Western society to Ancient Greece. Given that, as I have suggested, competition between the US and Eastern nations was paramount in the development of digital television as well as advances in internet technology, the narrative *SG-1* constructs about the stargate legitimizes the destiny of the US – the self-proclaimed bastion of Western political values – to establish superiority in media technologies over growing non-Western powers. Moreover, the general construction of *SG-1*'s universe tends to reify

technological development, rendering it a natural or cultural characteristic of particular groups rather than the outcome of specific social, political, and economic processes, as in the episode "Spirits," in which Daniel tells the descendants of American Indians on another planet of their ancestors on earth that "even today, they value the natural world much more than technology." Here we find the familiar binary of colonialist discourse that associates technology with the West and civilization while non-Western cultures are associated with nature and technological backwardness. The result is a tendency to naturalize and de-politicize the dramatic disparity in technology between the "first" and "third" and "fourth worlds" produced by the uneven geographical development of global capitalism.

Classical Orientalism, however, does not provide a full explanation of SG-1's construction of the Goa'uld as an Oriental threat. While the series attempts to de-legitimize their technological prowess through portraying them as parasitic thieves of other civilizations' technological advancement, the Goa'uld are nevertheless vastly technologically superior to Earth. As a high-tech alien threat, the Goa'uld are in many ways presented through a techno-Orientalist lens in a way that mirrors the imagining of Japan in US culture. As Morley and Robbins suggest, the technological prowess of Japan destabilized traditional Orientalist framings that equated the West with modernity versus a pre-modern Orient. Japanese technological achievements created a fear of technological "emasculation" for the US. The response to this anxiety was an effort to re-affirm Western superiority through the construction of the Japanese within a techno-Orientalist discourse as devoid of the humanity and pluralistic ethnic diversity of the US. These representations, Morley and Robbins argue, constructed the Japanese as "the figure of empty and dehumanized technological power…represent[ing] the

alienated and dystopian image of capitalist progress."[26] In a sense, then, Western fears about technological progress were projected onto its imagining of Japan, while its inherent superiority was affirmed, but in different (though no less racist) terms than the Orientalist equation of the West with modernity and technological progress. Like the Japanese, the Goa'uld presented a threat not easily contained within the power/knowledge nexus of Orientalism, one that could endanger the very security and integrity of the West (and the US specifically). The Goa'uld possess a variety of advanced technologies, including FTL space ships, energy weapons, and non-invasive healing devices that make the technology of the SGC appear primitive and thus the opposition between the Goa'uld and the SGC, as of that between the Japan and the US, cannot be constructed in terms of modern vs. pre-modern. In its attempt to contain this threat, *SG-1* employs a techno-Orientalist representational schema that portrays the Goa'uld as ruthlessly efficient and mechanical, concerned only with the development of their technological and military power without concern for the preservation of life. The Goa'uld's ruthless pursuit of power is also paired with an obsession with racial purity that puts them in stark contrast with the racial pluralism of the SGC. Through the association of the Goa'uld's technological advancement with these anti-liberal and anti-democratic qualities, *SG-1* uses the Goa'uld as a foil onto which it projects anxieties about new technologies of hypermobility while portraying Earth's technological advancement, by contrast, as taking place within a democratic and humanistic context. In all these ways, *SG-1*'s portrayal of the Goa'uld falls in line with an emerging discourse of techno-Orientalism that worked to epistemically contain the threat posed by the rapid pace of Japanese technological advancement.

[26] Morley and Robbins, 170.

The episode “Fair Game” provides an illustrative example of how Orientalist and techno-Orientalist representations often co-exist within *SG-1*’s imagining of the Goa’uld. The narrative of the episode involves SGC attempting to reach some kind of peaceful arrangement with 3 representatives of the Goa’uld system lords. As previously mentioned, the seemingly irrational actions of the Goa’uld and their inability to put aside internal squabbling to reach a logical settlement in their own interests meshes with Orientalist representations of Middle Eastern terrorists as irrational and bent only on violent domination. At the same time, however, the Goa’uld are meeting with the SGC because of the potential threat Earth presents to the technological and military superiority of the Goa’uld. Unlike Middle Eastern terrorists, who viewed the United States as a powerful enemy, the Goa’uld see the Earth as a mere nuisance, a primitive race in relation to their own technological advancement whose modest technological advancements they are seeking to squash before they can present a serious threat. In this way, the imagining of the Goa’uld here resonates with techno-Orientalist representations of the Japanese as a ruthless but technologically superior race.

SG-1’s Orientalist/techno-Orientalist representations also intersect with its gendered constructions in particular ways that highlight the intertwining of masculinity, nationalism, and Eurocentrism. Interestingly, female Goa’uld are not seen as inferior to males within Goa’uld society. Women are system lords of equal power and stature to that of male system lords. This contrasts with traditional Orientalist representations of submissive and subservient Eastern women and with more contemporary imaginings of the Orient as a space of female oppression and even enslavement – imaginings that have frequently been invoked more recently in justifications for the war on terror. What is most notable in *SG-1*’s Orientalist and gendered

imaginary is the way in which classic gendered Orientalist tropes come up against anxieties about Eastern femininity as a threat to Western, and particularly US, masculinity and security. In the season 1 episode "Hathor," for instance, a female Goa'uld who has been slumbering in an Aztec pyramid for thousands of years awakes and finds her way to Stargate Command where she uses a chemical compound to seduce all the male personnel and take control of the facility. Aiming to produce a Goa'uld army from hundreds of larval Goa'uld, Hathor – in Egyptian mythology, a goddess of fertility – temporarily turns Jack into a Jaffa and attempts to impregnate him with the Goa'uld larva. Hathor's scheme is ultimately thwarted by the women of SGC, led by Samantha (Sam) Carter and Dr. Fraser, who are immune to Hathor's chemical powers of seduction. To an extent, Hathor fits within Orientalist representation of Asian femininity, as she is marked by a seductive and overpowering sexuality. Hathor's scantily clad figure – adorned in Egyptian accoutrements – suggests classic Orientalist images of the Haram. However, this femininity ultimately becomes a threat to the security of SGC and its male-dominated leadership. In rendering men into vessels to be impregnated, Hathor inverts images of Oriental fecundity in a way that threatens to emasculate the men of *SG-1*. Notably, her means of seduction are also technological, as she uses an advanced chemical compound to take control of the SGC. Here, classical Orientalist images of seductive feminine sexuality intersect with techno-Orientalist anxieties of technological emasculation by a powerful Eastern threat.

At Home with Hypermobility

Perhaps one of the most significant social effects of the time-space compression produced through hypermobility technologies was a disruption of the seemingly stable

oppositions of public and private space. Like the technologies of digital television and the Internet, the stargate in *SG-1* works to effect this destabalization between the private/domestic and public spheres. In opening the heart of a top-secret underground Air Force base to traffic from across the galaxy, the gate positions the symbolic domestic space of the nation as a node in a vast galactic network of hypermobility, where it offers instantaneous access to the external world but also introduces the threat of unwanted contagions from the public sphere entering the domestic environment. The problem for SGC thus becomes how to ensure the security of the domestic space while retaining the mobility afforded by the stargate, just as the problem for the users of digital television and other hypermobility technologies was how to benefit from the mobility provided by these technologies while containing potential threats to the sanctity of the domestic space. In a sense, this problem was always central to the development of television. As Lynn Spigel argues, television has historically served a gatekeeping function through allowing images and ideas from the outside world into the domestic space while at the same time keeping out images of unacceptable difference that would threaten the integrity of this space.[27] If we think of the stargate in terms of the development of digital television, we can conceptualize the threat of foreign incursion by the Goa'uld via the stargate as representing a crisis in this gatekeeping function of television. Many of SG-1's adventures in the first few seasons can thus be seen as attempts to mediate this crisis, embracing the possibilities of digital hypermobility while working to neutralize the threats posed by new technologies.

[27] Lynn Spigel, *Welcome to the Dreamhouse: Popular Media and Postwar Suburbs* (Durham, NC and London: Duke University Press, 2001), 35-38.

With digital television opening up more options for televisual exploration and thus more threats of social contagion, television's gate-keeping process evolved into a set of diverse social and technological practices including parental control mechanisms (e.g. the V-chip), the self-selected communities of niche broadcasting, and increasingly complex TV rating rubrics. *SG-1* registers these new attempts to maintain the integrity of the private/public televisual boundary as well as the fundamental anxiety that these attempts might fail, proving inadequate to the pace at which social, economic, and technological forces were producing an increasingly interconnected world. After Apophis comes through the gate in the pilot, the SGC puts into place several security features to ensure that unwanted visitors cannot travel through the gate. A metal "iris" is installed that blocks the gateway when activated and SG teams must carry a "GDO" with them, which transmits a signal to the SGC, indicating it is safe to open the iris. The iris thus becomes one way in which the series registers and attempts to process the anxiety provoked by the emergence of new hypermobility technologies, assuaging the fear that these technologies could lead to hostile and unwanted invasions of social Others through insisting on the ability of these technologies to be contained through gatekeeping functions. However, this anxiety becomes impossible to fully contain, and there are multiple episodes throughout the series in which the gatekeeping function brakes down and the integrity of SGC's domestic space is compromised, as in "Serpent's Song" when the Goa'uld Sokar barrages the iris with radiation that weakens the metal or in "Foothold," when shape-shifting aliens take over the SGC through impersonating the members of SG-1. Thus, despite *SG-1's* attempts to neutralize the threats posed by the emergence of digital television and other hypermobility technologies through

defensive gatekeeping operations, the global flows enabled by these technologies inevitably exceed the capacity of these defenses.

The division between domestic and public space is of course a heavily gendered one, with domestic space historically constructed as feminine in opposition to masculine public space. This association of the domestic and feminine impacted the positioning of television as a "feminine" technology, particularly as it was thought of as a passive medium in contrast to more interactive, "masculine" media technologies. The transition from analog to digital opened up possibilities of making television interactive, as the digital infrastructure provided for two-way communication between sender and receiver as opposed to the one-way transmission of analog television, and this new interactivity upset the gendered associations of television. As William Boddy notes, the public discourse around interactive television was based on the celebration of a masculine interactivity versus a passive form of televisual viewing constructed as feminine.[28] Hopes for digital television were thereby inextricably caught up with gendered anxieties and fears of US society becoming too "feminine." At the same time, however, women were increasingly embracing normatively "masculine" modes of technical mastery over new media technologies. These shifts in gender constructions vis-à-vis digital media are registered prominently in *SG-1*. Many of SG-1's early adventures, particularly throughout the first season, are attempts to better understand and control the relatively mysterious technology of the stargate. The technical knowledge and experience necessary to effectively operate the stargate and to understand and manipulate the various other technologies of hypermobility SG-1 comes in contact with is possessed not by one of the male characters but by the female Sam Carter.

[28] Boddy, 69-70.

This challenge to the normative masculine construction of digital television and other hypermobility technologies is further established through the contrast of Sam's technical expertise to the almost complete ignorance of Jack O'Neil, the series most normatively masculine character, about these technologies.

Juxtaposed with Sam's figuring of feminine technological mastery is a repeated emphasis on her desire to be a mother, whether through biological reproduction or adoptive motherhood. In season 1's "Singularity," Sam becomes a mother figure to a young girl SG-1 discovers on a planet, the only survivor of a Goa'uld chemical weapon attack. After bringing her back to the SGC, they discover that the girl, Cassandra, has been injected with Naqueda by the Goa'uld and the interaction of the Naqueda with the calcium in her body will eventually trigger a massive explosion. Sam's status as a surrogate mother to Cassandra is less than subtly established when Cassandra wakes up from a bad dreaming yelling for her mom and is quickly comforted by Sam. With no other options, SG-1 decides the only course of action is to take Cassandra deep underground in a military bunker where the explosion can be contained. Sam volunteers to escort her down and, after an emotional scene in which she promises to return, suddenly decides to stay with Cassandra. To everyone's surprise, there is no explosion, and Cassandra appears to be fine. Sam reasons that the explosive reaction would only be effected if Cassandra were to go through the stargate. However, rather than crediting Sam's scientific and technical intuition for her sense that Cassandra would not explode as expected, the episode links it to Sam's maternal connection to the girl as Teal'c comments that perhaps she knew because of "a mother's intuition." This maternal construction of Sam is further established in "2010," where in an alternate timeline future, she is distraught because of her unsuccessful

attempts to have a child and discovers that she has been rendered infertile by an anti-aging drug.[29]

Motherhood and images of the maternal have played an ambivalent role in SF, signifying both male horror at the otherness of the maternal figure and the patriarchal domestication of the feminine in the service of reproductive futurity.[30] The association of motherhood and technology, more specifically, evoke an anxiety that Mary Anne Doane characterizes as "both a nostalgia for and terror of the maternal function."[31] In this sense, Sam's desire to become a mother can be understood to function both as a figuring of the threat to masculine technological and biological mastery and a containment of this threat through its articulation within an order of familial reproduction. Further complicating these tensions is the fact that Sam never actually becomes a mother. Cassandra is adopted by Dr. Frasier and Sam never has a child of her own. In Sam's "failure" to become a mother, there seems to be an anxiety manifested that is inverse yet directly linked to that of passive televisual viewership feminizing society: that of increasingly interactive digital media technologies rendering human society sterile, disconnected from "natural" biological processes associated with the fertility of the female body. Returning to "Singularity," we find this same paradoxical gendered anxiety rendered in the figure of Cassandra. As a child, Cassandra serves as a signifier of futurity, yet

[29] The centrality of the figure of the child in this narrative and Sam's importance as a maternal figure point to the prevalence of the theme of "reproductive futurism" in 90s SFTV, which I explore in further detail in chapter 3.
[30] On the former, see: Lynda K. Bundtzen, "Monstrous Mothers: Medusa, Grendel, and Now Alien," *Film Quarterly* 40, no. 3 (1987): 11-17 and Barbara Creed, "Alien and the Monstrous Feminine: An Imaginary Abjection," in *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema*, ed. Annette Kuhn (London: Verso, 1990). On the latter, see: Heather Latimer, "Bio-Reproductive Futurism: Bare Life and the Pregnant Refugee in Alfonso Cuaron's *Children of Men*," *Social Text* 29, no. 3 (2011): 51-72 and Rebekah Sheldon, "Somatic Capitalism: Reproduction, Futurity, and Feminist Science Fiction," *Ada: A Journal of Gender, New Media, and Technology*, no. 3 (2013).
[31] Mary Ann Doane, "Technophilia: Technology, Representation, and the Feminine," in *The Gendered Cyborg: A Reader*, eds. Gill Kirkup et al. (New York: Routledge, 2000), 120.

one that is constructed simultaneously as threat and promise. She holds out the promise of a reconciliation of the natural and technological through her relationship with Sam but also embodies (quite literally) the destructive threat of hypermobility technologies. As a female child, she foregrounds the ambivalent figuration of the feminine in the series' imagination of these technologies, which oscillates between technological proficiency – a threat to the masculine construction of technology – and natural fecundity – the reterritorialization of this threat. Reproduction thus takes on am ambivalent character in the techno-futurist imagination of the series. On one hand, it signifies a continuation into the future that takes the shape of a merging of the technological and natural. At the same time, however, this futurity brings with it the threat of a technological progression that outpaces the grasp of human control.[32]

Earth Must be Defended

As I have argued, *SG-1*'s representations of wormhole technology are heavily structured by a geopolitical imaginary based in Orientalist and techno-Orientalist discourse. Indeed, *SG-1* makes it especially clear that hypermobility technologies do not exist outside of their geopolitical imaginary, an imaginary within which they are both designed for a specific purpose and used for purposes that may or may not align with those for which they were designed, but nevertheless one which determines their conditions of possibility. While SF is more capable than other genres of television in pushing against the thresholds of these conditions, *SG-1* exhibits an overwhelming tendency to reproduce hegemonic geopolitical worldviews. In

[32] In chapter 3, I examine in more detail how what I term "reproductive techno-futurism" works to mollify these contradictory significations of reproduction in other SFTV series.

particular, we can see how (techno-)Orientalist geographies and anxieties generated by a shift to hypermobility become articulated in the series to the emerging political ideology of neoconservatism. Neoconservatism stressed the need for US military intervention abroad in order to ensure the domestic security of the US through generating a world safe for the spread of neoliberal democracy. If the liminal space of the period between the end of the Cold War and 9/11 might have at times opened up to visions of radically different futures, neoconservatism worked to close off these visions and to re-consolidate US geopolitical hegemony in a post-Cold War form. The adventures of SG-1 help to illuminate the ways in which this neoconservative worldview constrained visions of a different geopolitical order, but also at times allow glimpses of alternative futures to emerge through the cracks of neoconservative hegemony.

First, however, it may be useful to briefly unpack how exactly neoconservatism figured into the emerging post-Cold War geopolitical position of the United States and its relationship with neoliberalism. The values of the SGC, celebrated by *SG-1*, embody the unique ideological configuration hegemonic within the US in the post-Cold War era. This configuration has consisted in the marriage of neoliberal and neoconservative ideologies, involving a simultaneous promotion of "free" global economic exchange and insistence on national integrity and the need for strong national defense and military action abroad to promote democratic developments and maintain US military hegemony. While the strongly nationalistic sentiment of the latter seems at first at odds with the expansive and deterritorializing tendencies (in ideology though not in practice) of the former, it is in fact much less paradoxical if we recognize that the marriage of neoconservative and neoliberal ideologies has ensured that

the global consolidation of class power can coincide with a strong, and often militant, nationalism. As Harvey argues, neoconservativism is not at all inconsistent with the "neoliberal agenda of elite governance, mistrust of democracy, and the maintenance of market freedoms."[33] At the same time, however, it serves as an antidote to the "chaos of individual interests" that neoliberalism tends toward with its "concern for order…[and] for an overweening morality as the necessary social glue to keep the body politic secure in the face of external and internal dangers."[34] Under this ideological configuration, individual pursuits can continue unhindered in the economic sphere while a collective morality ensures the cohesiveness of the national community in the social, cultural and political spheres. The neoconservative emphasis on militarism is also important to the construction of national identity. Neoconservatives are, Harvey notes, "far more likely to highlight threats, real or imagined, both at home and abroad, to the integrity and stability of the nation."[35] In *SG-1*, we find this particular ideological configuration active in the values espoused and embodied by the SGC. The centrality of neoconservatism is bespoke by the constant emphasis on both the necessity of defending the earth from the Goa'uld and on the need for military intervention on foreign planets. On the other hand, the push for free exchange of technologies and resources – we are constantly reminded that the primary mission of the SGC is to gain access to alien technology through diplomatic means (i.e. trade) – with alien and off-world human cultures points to the adherence to neoliberal ideals.

[33] David Harvey, *A Brief History of Neoliberalism* (Oxford: Oxford University Press, 2005), 91.
[34] Ibid., 82.
[35] Ibid.

The apparent tension (on an ideological level) between neoconservativism and neoliberalism within the ideological matrix of US nationalism exposes a deeper tension in the historical development of US hegemony and its place in the current global order, a tension particularly evident in *SG-1*. In their book *Empire*, Michael Hardt and Antoni Negri argue that as opposed to the tendency of European-style imperialism to exclude, US expansionism historically operated through an inclusive form of sovereignty that absorbed others into its productive multitude. It is this tendency that explains the drive behind the US's imperial expansion across the continent and ultimately the expansion of what they term "network power" – the constitutive power form of late capitalist globalization – across the globe. However, Hardt and Negri note that this expansive and inclusive tendency continually ran up against a counter-tendency to fall into European-style imperialism, creating a paradox consisting in the coupling of "the open and expansive space of empire together with its continuous reterritorializations," a tension that runs "throughout the articulation and establishment of imperial sovereignty in practice."[36] This tension becomes evident early in US history in the brutal subordination of the Native Americans who "could not be integrated in the expansive movement of the frontier as part of the constitutional tendency; rather, they had to be excluded from the terrain to open its spaces and make expansion possible."[37] While Hardt and Negri claim that this tension has been resolved in favor of the deterritorializing and inclusive tendency, it appears to persist in the current historical moment, as we have seen in the marriage of neoliberal and neoconservative ideologies. In the mixing of neoliberalism and

[36] Michael Hardt and Antoni Negri, *Empire* (Cambridge & London: Harvard University Press, 2000), 167.
[37] Ibid., 170.

neoconservatism, the deterritorializing tendencies of neoliberalization exist in tension with the reterritorializing force of neoconservative nationalism. Thus, US nationalism, as Harvey argues, assumes a "dual character":

> On the one hand it presumes that it is the God-given…manifest destiny of the US to be the greatest power on earth…and that, as a beacon of freedom, liberty, and progress, it has been and continues to be universally admired and considered worthy of emulation…The US therefore benevolently and generously gives freely of its resources and its values and culture to the rest of the world, in the cause of conferring the privilege of Americanization and American values on all and sundry. But US nationalism also has a darker side in which paranoia about fearful threats from enemies and evil forces from outside take over. The fear is of foreigners and of immigrants, of outside agitators, and now, of course, of 'terrorists.'[38]

In this "dual character" of US nationalism, we see most clearly displayed the contradictions inherent in US expansionism and its influence on the present neoliberal global order. And it is these same contradictions that emerge in *SG-1*, particularly in the tension between, on one hand, the SGC's desire to cultivate relationships with and bring US values to alien cultures and, on the other, the emphasis on defending the Earth from the Goa'uld (and other threats) at all costs and a reluctance to trust its alien allies.

The mini-arc spanning from season 1's "There But For the Grace of God" to the season 2 opener, "The Serpent's Lair" provides an especially illustrative example of how *SG-1*'s vision of wormhole travel is constrained by the articulation of neoconservative and neoliberal ideologies that was emerging in the post-Cold War era. In "There But For the Grace of God," Daniel Jackson is transported into an alternate reality after he touches a mirror-like device on an SG-1 mission. After returning through the stargate, Daniel finds that in this alternate reality earth is

[38] Harvey, *Brief History,* 195-96.

facing an imminent attack from the Goa'uld and it is too late for the SGC to do anything other than evacuate its personnel through the gate. The alternate reality trope here could potentially provide the opportunity for imagining a radically different world – one in which, for example, wormhole travel technology has produced the means for a more equitable society in which the conditions that gave rise to Goa'uld domination of the Jafaa and humans had been eliminated[39] – but instead it simply reaffirms the danger posed to the security of earth by the Goa'uld. In the season 1 finale, "Within the Serpent's Grasp," the events that Daniel witnessed in the alternative reality appear to be coming to fruition in his reality as a Goa'uld invasion of earth is in progress. Thus, there is an inevitably ascribed to the Manichean conflict between SG-1 and the Goa'uld that occludes any possibilities not predicated on the exercise of US military force. The alternate reality device makes another appearance in the season 3 episode, "Point of View," when versions of Sam and Major Kawalski from another reality travel to SG-1's reality to escape the impending Goa'uld invasion of earth in their own reality. Alternate Sam tells SG-1 that they chose this reality out of an infinite number of other ones because it was one of only a handful of realities in which the Goa'uld had not invaded earth. Again here there is an inevitability ascribed to the conflict between Earth and the Goa'uld, and in keeping with the Orientalist framing of this conflict, the threat posed by the Goa'uld is constructed as a mythical and ahistorical threat, divorced from any possible historical conditions that might explain the reasons for this threat or that might point to the possibility of a world in which US military

[39] It should be noted that such utopian imaginings of the future are not entirely uncommon in SFTV. The *ST* franchise, in particular, is constructed around just such a vision of the future.

power is not necessary to ensure the security of a fragile earth against an inhuman foreign threat.

The emerging hegemony of neoconservatism is also repeatedly figured in the emphasis placed throughout the series on the need for US military power. Indeed, it is of crucial importance that the stargate is controlled exclusively by the military (until later seasons) and is kept secret from the civilian population who, oblivious to the existence of the stargate, are also oblivious to the imminent threats the stargate program has opened earth up to. There is an implicit understanding in this general conceit that the US military is justified in representing the interests not only of the United States but of the entire world, an understanding that is also made explicit at several points throughout the series, as in "Fair Game," when Jack is appointed by the Asgard and the US government to represent the entire planet in negotiations with the Goa'uld system lords. *SG-1* thus provides a sort of neoconservative fantasy in which a strong US military backed by a pro-interventionist foreign policy is legitimized as the most beneficial situation for the safety and security of the global community. Within the series, US geopolitical hegemony is posed as the only possible counteracting force to the destabilizing effects of stargate travel that threaten the security of previous political borders. In this way, *SG-1* registers and attempts to come to terms with the anxiety induced by the rapid development of digital television and other digital hypermobility technologies in the US through a reterritorializing operation, mediating fears of an unknown and unknowable global future through a return to the familiarity of a world in which security is ensured by the resilient strength and exceptionalism of the United States. This is not to suggest that digital television is solely responsible for producing the anxieties I mention above, but rather that digital television

emerged as part of a global networks of digital media technologies that threatened the stability of geographic borders and understandings of space, time, and movement.

These affirmations of American exceptionalism and militarism also register national anxieties about a world produced through technologies of hypermobility that exceed the stabilizing control of US geopolitical hegemony, anxieties perhaps most explicitly conveyed in the season 4 episode, "2010." The episode is set in the future of an alternate timeline in which the SGC has established an alliance with the Aschen, an advanced alien race, and Earth has joined a federation of planets under Aschen leadership. Most surprising for the viewer is that as the episode opens, we find the stargate no longer hidden in Cheyenne Mountain but displayed prominently in an interplanetary hub in Washington where it now serves as a public transportation technology. At first, this new world seems to be a utopian society in which the Goa'uld have been defeated and the Aschen federation has generated peace and prosperity for its citizens. The SGC has been closed down and Cheyenne Mountain is now a public museum where visitors can learn about the history of the stargate and the SGC. In this future, it appears, the defensive mission of the SGC is no longer relevant. However, not surprisingly, all is not as it seems. Sam, now a scientist working with the Aschen and married to the Earth ambassador to the federation, has been attempting unsuccessfully to have a child. Her Aschen doctors have examined her and assured her there is nothing physically wrong with her reproductive system. Dr. Frasier, her old friend and doctor for the SGC, however, convinces Sam to undergo an examination and discovers that she is in fact unable to have children. Suspicious that the Aschen have lied to her, Sam uses her access to the Aschen database to conduct some research and discovers that the human fertility rate has plummeted 90% since the founding of the

federation and that this decrease in fertility appear to be an intentional form of sterilization administered through an anti-aging injection. Sam and her former SG-1 teammates, including a reclusive Jack who had vociferously objected to the alliance with the Aschen, decide the only way to resolve this problem is to send a message back in time through the stargate – at the exact moment of a solar flare which will create the necessary temporal distortion – to ensure that SG-1 never visits the Aschen home planet and thus that this alternate future will never occur. In a dramatic final scene, all of the conspirators, under heavy fire from the defense systems surrounding the gate, give their lives to successfully deliver the message to their younger selves. There are a few points here that seem particularly important in relation to the confluence of hypermobility technologies and post-Cold War national anxieties. First, and most obviously, the episode is animated by the fear of the US losing its place of geopolitical leadership due to an inability to establish technological superiority, a fear that resonates strongly with techno-Orientalist anxieties and the warnings of conservatives like George Gilder about the need for the US to lead the way in the development of digital television and internet technology. While the episode does not give us any background as to how the Aschen took over control of the stargate, the implicit historical transition from a SGC-controlled gate to an Aschen-controlled gate serves to signify a potential loss of US technological superiority to other global powers (most likely Japan) and the disastrous consequences that might result from this shift. Within the Aschen federation, Earth no longer holds control over the stargate program and are reduced to supporting roles in service to the Aschen, which can be seen as dramatizing fears about the Japanese and other growing technological powers "invading" and "taking over" the United States. Moreover, the opposition of Jack, considering his place as the team member

most committed to the defense of Earth and Earth's technological autonomy, to the partnership with the Aschen from its beginnings further registers the hegemony of the Aschen as a direct threat to US technological and political superiority. Secondly, these anxieties are rendered through a focus on reproduction, specifically the capacity of the female body to reproduce. Fears about the future of the nation become explicitly linked to the ability or inability to reproduce, foregrounding the ideological potency of what Lee Edelman has termed "reproductive futurism."[40] Reproductive futurism here also becomes entangled with racial hierarchies as the inability of humans to reproduce amid the growth of the Aschen population can be read as representing the precarity of white supremacy in the US and white Eurocentric fears of the United States becoming an increasingly multi-racial society.

In addition to anxieties about a loss of US political and technological superiority, SG-1's ultimate victory over the Aschen in "2010" points to the fundamental belief in the moral superiority of American values (born out of the persistent ideology of American exceptionalism) on which the claims of neoconservatism to the necessity and rightness of US military intervention are founded. As I have noted, this same claim to moral superiority was crucial to the discourse of techno-Orientalism, which responded to Japanese technological ascendency through associating Japanese culture with an absence of democratic and humanitarian values. In this context, advances in hypermobility technologies by the US were framed within a narrative that linked American moral superiority with the inevitability of its future technological progress. US's current second-place status in the technological race to Japan was, this narrative assured, only temporary, as the superiority of US liberal democracy destined it for technological

[40] Lee Edelman, *No Future: Queer Theory and the Death Drive* (Durham, NC: Duke University Press, 2004).

greatness as well. *SG-1* both affirms and troubles the claims of this emerging ideological framing, at times celebrating American moral superiority and the technological advances it promised, while at others suggesting a different vision of the US's place in a community of nations based on a more pluralistic recognition of difference that allows for alternative articulations of social values with technological advancement.

SG-1 repeatedly establishes the reason that Earth is perceived as a threat by the Goa'uld (and a potential ally for the Asgard and other benevolent advanced races) is because of their rapid technological advancement. In "Fair Game," for example, when SG-1 meets with three Goa'uld system lords to, with the help of the Asgard, negotiate a treaty to protect Earth from a Goa'uld invasion, the Goa'uld representatives demand that earth not be allowed to develop any further technologically so that they will no longer be a threat to the system lords. It seems of course unlikely that Earth's relatively primitive technology would be of any concern to the other races with which SG-1 comes into contact, and we can note the fantasy of human exceptionalism at play here, but viewing this undue hubris within the geopolitical context the series draws upon points more specifically to a particular brand of American exceptionalism fueled by the leading role of the US in the Cold War. With the collapse of the Berlin Wall, however, this fantasy of exceptionalism became increasingly invested in the quest for technological superiority, particularly in relationship to Japan.

If the United States is still lagging behind in terms of its technological development, *SG-1* nevertheless affirms that the nation's moral superiority destines it for technological greatness. Given the neoliberal discourse proclaiming the "end of history" in the triumph of American liberal democracy over communism, the pursuit of superiority in the development of

hypermobility technologies provided the opportunity to plot US history along a new neoconservative-neoliberal teleological narrative, one in which the already established political, economic, and social superiority of the US guaranteed the inevitability of its march towards technological hegemony. This narrative becomes most clearly established in the series through the SGC's relationship with the Asgard and the journey to establish humanity as the "fifth race." In the season one episode "Torment of Tantalus," SG-1 travels to a planet where they believe Ernest Littlefield, an early participant in the stargate program, became stranded during a successful 1945 attempt to open the stargate. On the planet, Ernest shows them a room that served at one point as a meeting space for four great alien races, a kind of "united nations of the stars" as Daniel puts it. The discovery begins a quest that will span the majority of the series' run to make contact with and hopefully one day join this great community of races. SG-1's efforts in this quest are emplotted along a progressive historical narrative in which a young human race develops along an inevitable path leading towards cosmic greatness and membership in a utopian universal community. In "Thor's Chariot," Sam and Daniel must pass a series of tests designed to ascertain a society's level of intellectual and moral development in order to meet the Asgard and potentially have access to their technology. Here, technological development is seen as a natural outcome of social development along a traditional Enlightenment teleology of historical progress rather than as a complex factor linked to particular economic conditions. In the context of the uneven geographical development of hypermobility technologies, through imagining technological underdevelopment as a natural symptom of an insufficiently socially advanced society, this association legitimates a capitalist system in which "first world" enjoyment of these technologies is predicated on the labor of

those in the "third world" who themselves are not integrated into the global circuits of hypermobility enabled by their labor. According to this ideological construction, the US is destined to achieve an ever-increasing level of technological development simply because it embodies the values of liberal democracy claimed as the telos of historical social and political development. Just as Jack is told by the Asgard after arriving on their planet in "The Fifth Race" that humans have already taken the first step towards joining the Asgards, Ancients, Furlings, and Nox as the fifth race in their great alliance, the values of the US place it along an inevitable path towards mastery over hypermobility technologies.

From another perspective, however, the situation is a bit more complicated, and we can glimpse the surfacing of more utopian image of a geopolitical future produced through hypermobility. If the American exceptionalism implicitly embraced here were the only vision of the future at play, we would assume SG-1 would be seeking the interplanetary superiority of Earth, a destined place of leadership amongst the great alien races. However, this is not the case. SG-1's desire is not to become leaders of this alliance, but to join and participate as equals, or even just as junior members. The utopian vision of a grand universal alliance, one that stands in tension with the false utopia of the Aschen federation from "2010" here seems to exceed the liberal cosmopolitanism of, for example, the *Star Trek* universe, in which a supposedly inter-racial egalitarian federation remains primarily under the control of humanity. In the narrative linking of this utopian vision to the hypermobility technology of the stargate, *SG-1* at its more radical moments imagines the potentiality of hypermobility technologies to enable a truly egalitarian society based around non-competitive free association.

Perhaps the most interesting alternative vision of social-technological development, and one that mounts a rare critique of the neoconservatism the series at other times embraces, is found in the season 1 episode, "The Nox." After hearing rumors from Teal'c about a planet that might provide a source of advanced technology – some type of cloaking ability that makes the indigenous birds invisible – SG-1 visits the planet, but soon discover that Apophis is also there. Following a firefight with Apophis and his guards that appears to kill the entire team, SG-1 awakes in the care of a seemingly primitive community who call themselves the Nox and who, we learn, have healed the teams' wounds and restored their lives. The Nox refuse to return SG-1's weapons and are unfazed by Jack's warnings about the danger the Goa'uld pose to the Nox. Echoing justifications for the first Iraq war (and several subsequent military invasions), Jack and Teal'c attempt to convince the Nox that they need the military assistance of SGC to protect them from the Goa'uld. As Teal'c puts it, "It is our way that the strong help the weak." Despite the Nox's attempt to explain that violence is not their way, SG-1 continues to assume the Nox ignorant and incapable of protecting themselves. However, at the end of the episode, the Nox reveal to SG-1 a surprising secret: a stunning high-tech city in the clouds that the Nox are able to hide completely from view. The Nox not only challenge the neoconservative militarism of SG-1, they also present us with a radically different vision of hypermobility divorced from the expansionary logic of imperial power that undergirds Western (and particularly American) forms of hypermobility. While the Nox do not reject hypermobility technologies, these technologies have been developed towards the end of peaceful co-existence of the Nox with their natural environment and with other civilizations. While peaceful co-existence is not in and of itself necessarily a guarantee of a radically different society, the extreme contrast between

the militarism of SG-1 and the peaceful way of life pursued by the Nox serves to mark the Nox as embodying a clearly distinct alternative vision of society from that provided by SG-1, even if the more specific features of Nox society, outside of its desire to avoid conflict, are left unexplored. Unfortunately, while SG-1 later discovers that the Nox were members of the Alliance of Four Great Races and they are mentioned sporadically throughout the series, only one of the Nox makes another appearance, and we learn no more about their society, leaving the subversive potentiality they introduce in the series largely unexplored.

Hypermobility as Threat/Promise

The same ambivalence towards advanced hypermobility technologies that we find in the series' engagements with the conjunction of techno-Orientalist and neoconservative ideologies animates its considerations about the broader hopes and threats these technologies offer for the future. While *SG-1* affirms the potential of hypermobility technologies to improve human and alien lives, it nevertheless betrays a marked ambivalence towards these technologies. Indeed, we are frequently presented with a deep tension between the humanist values espoused by the protagonists of *SG-1* and the possibility of a post-human society in which the binary opposition between human and technology is dissolved. In the episode "Tin Man," for example, the team travels to a planet where the only inhabitant captures them and seemingly transports their consciousness into android replicates of themselves. Despite having all the memories and personalities of their original selves, the team is greeted with suspicion when they arrive back at SGC, held in custody and suspected as imposters sent by the Goa'uld. Eventually, SG-1 discovers that their consciousnesses were in fact not transported but copied

and that their original selves remained intact. This fear over becoming no longer human seems to be in tension with the constant reliance of the SGC on technology, most notably the stargate itself. This same tension is, of course, central to techno-Orientalism, and as we have seen, these fears about the de-humanizing effects of hypermobility technology are displaced in the series onto the Goa'uld.

The role of the stargate in the series also highlights a tension between utopian hopes for digital media technologies to produce a better world and dystopian fears of a society in which these technologies become tools of domination. At the beginning of the series, when Apophis and his personal Jaffa guard come through the gate, killing several air force personnel and taking one hostage, the gate is presented immediately as a source of danger, a portal opening onto threats from a non-Western Other that disturbs the relative peace of the base and by extension the United States. The re-opening of the gate renders the US – which becomes representative of Earth in the series – vulnerable to a force it can't immediately control. Once it is discovered that the stargate can be used to travel to thousands of other planets, the image of the gate as a source of external threats quickly comes into conflict with a more utopian emphasis on the scientific and humanitarian potential of gate travel. While in many instances the series seems to respond to and dwell on the anxieties provoked by hypermobility technologies, the characters of Sam and Daniel often embody a sense of hope and excitement that these technologies can accommodate aims of peaceful exploration and scientific and cultural exchange with other cultures. Thus, these characters and the ideals they represent stand in tension with the more militaristic and nationalistic perspective – a reaction to the anxiety engendered by space-time compression and hypermobility – of Jack and the political

and military forces that direct the SGC. One exchange in the pilot episode highlights this tension particularly well. As the future SG-1 team meets with General Hammond to discuss how they will respond to the discovery that the stargate network links thousands of planets, Hammond expresses his sense of the threat the stargate poses while Sam responds by invoking the possibilities it offers:

> General Hammond: This thing is both vast and dangerous. We are so far over our heads, we can barely see daylight. We'd be much better off if the Stargate had been left in the ground
>
> Sam Carter: With respect sir, we can't bury our heads in the sand. Think of how much we could learn, what we could bring back

While Hammond's remarks embody the anxiety provoked by the deterritorializing or deboundarying operations of hypermobility technologies, and the reterritorializing or reboundarying response to this anxiety, Sam's response expresses the more utopian longings for discovery and peaceful exploration that hypermobility technologies tapped into. While the ideals of discovery and exploration have a history inextricable from the expansion of global capital and colonial oppression, they nevertheless mark a more hopeful and utopian valence of hypermobility that exists in tension with the regressive nationalism of neoconservative ideology.

While Sam often embodies an exploratory scientific spirit, seeing in the Stargate the means to the peaceful expansion of human knowledge, Daniel becomes a champion of the stargate's potential to initiate peaceful contact with other cultures. Daniel strives to understand the cultures SG-1 interacts with, often impressing upon the rest of his team the importance of being sensitive to cultural differences, and to establish close diplomatic relationships with alien cultures. We can perhaps see Daniel's utopian hopes for the stargate most clearly expressed in

his excitement in discovering an ancient meeting place of a federation of alien races in the episode "Torment of Tantalus." Prior to discovering the room, Jack suggests that they head back to Earth since there is a big storm heading towards their location. Daniel protests, saying that "we have only begun to explore this place." Upon discovering the room and finding that it was a meeting place – "a kind of United Nations" – for a federation of four alien races that communicated through images of atoms, Daniel exclaims, "This could be the key to understanding our existence!" Daniel's enthusiasm for discovery and specifically for the possibility of discovering a peaceful coalition of alien races prevents a stark contrast to the defensive response towards the hypermobility of the stargate represented by the military command of SGC. In this way, the characterization of Daniel, like that of Sam, work in the series to acknowledge the more utopian hopes associated with hypermobility technologies, and their contrast with other characters highlights the ambivalent nature of cultural understandings of hypermobility.

Invisible Labor

The intensification of time-space compression and the emergence of hypermobility are largely products of significant shifts in the capitalist mode of production. It is then interesting that, given this embeddedness of hypermobility technologies within global circuits of capitalist production and consumption, there is little reference to the economic conditions within *SG-1*'s rapidly expanding inter-planetary society.[41] Here, *SG-1* mirrors many other 90s SFTV series to

While this elision is interesting, it is not necessarily surprising, given that SFTV has historically tended to suppress images of labor and class conflict. When labor and class conflict are rendered visible, it often becomes a vehicle for the triumph of the privileged protagonists who benevolently resolve the conflict between labor and management. The season 3 episode of *Star Trek: TOS* "The Cloud Minders" provides one example of this tendency as the crew of

feature the trope of wormhole travel. While the trope of the wormhole in these series in many ways provides a complex image of hypermobility in late global capitalism, what is often strikingly absent is the visibility of any kind of physical labor required to produce or maintain wormhole travel technologies. In fact, wormhole travel seems to work without any human labor, appearing as a magical technology, often created by ancient evolved races credited only as the intellectual force behind these technologies. This elision of labor, however, is not an anomaly but rather a product of the broader discourse on hypermobility technologies out of which these series emerged. As Tung-Hui Hu argues, the cultural imagining of digital networks as enabling an apparently instant and unmediated relationship between users works to render the labor upon which these networks rely invisible.[42]

In the context of digital television, the invisibility of labor in series centered on wormhole technology is particularly significant given that the emergence of digital televisual technologies during the 90s was predicated on capitalist expansion via free trade agreements, in particular the North American Free Trade Agreement which dramatically expanded the *maquilladora* system in Mexican border towns, enabling multinational corporations like Sony, Mitsubishi, Sanyo, and Samsung to exploit cheap labor for the production of television sets and peripheral technologies. Unfortunately, the SFTV of the period largely fails in illuminating this

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the *Enterprise* forces the ruling class, who reside above the planet in a cloud city, of an alien planet to grant extended rights and better working conditions to an oppressed underclass that labors in the mines on the planet's surface. An example contemporary to SG-1 comes in the *Babylon 5* episode "By Any Means Necessary" where are illegal worker strike by dock workers on the space station Babylon 5 that results in tension between the strikers and Earth government, who has cut the budget for the workers, is brought to an end by the clever actions of Commander Jeffrey Sinclair who outsmarts Earth government to provide the needed funds for the workers. In both cases, the presence of exploitative labor serves to achieve little more than prop up the benevolent actions of the main characters who have little in common with the members of the working class they help. None of the resolutions in instances such as this come from the actions of the laborers themselves (who are often seen as unnecessarily exacerbating the situation) but from the wise actions of figures from the upper classes.

[42] Tung-Hui Hu, *A Prehistory of the Cloud* (Cambridge, MA and London: The MIT Press, 2015), xiii.

dialectical underside of hypermobility in the immobility or forced mobility of cheap labor required by flexible accumulation. By imagining wormhole travel technologies as magical and purely intellectual products, SFTV tended to legitimate the exploitative labor practices of late global capitalism, missing a chance to seize on a moment of potentiality and engage in imagining alternatives to the hegemonic systems of global capital. When labor conflicts do arise, the series attempt to dispel the problematics of labor, and conflicts are dealt with quickly, usually limited to one episode. In the *SG-1* episode "need," for instance, the SG-1 team finds themselves in a slave labor camp where naqueda, the essential chemical component of the stargate, is mined. The focus here, though, is not on the exploitation of the workers in the mine, but rather on the struggle of Daniel, to whom the local princess takes a liking and invites to stay with her while his fellow team members are enslaved, with addiction to the sarcophagus, a Goa'uld technology that heals and reinvigorates the body. Moreover, in this case, US complicity in the exploitation of third world labor is elided through the displacement of these practices onto alien civilizations. While the episode alludes to the exploitative practices of global capitalism, these practices are located elsewhere, outside of the US and US-sanctioned free trade networks. This locating of exploitation elsewhere resonates with the techno-Orientalist representations that pervade the series, particularly as they construct images of Japan as ruthless and exploitative in its pursuit of economic superiority and its work processes as dehumanized.

Similarly, in the episode, "Beneath the Surface," SG-1 finds themselves with their memories gone and working as laborers in an underground factory on an alien planet. As the team slowly puts the pieces of their lost memories together, we learn the truth of what is

happening on the planet. The government has told the workers that they are the only living members of their society and that the world outside of the factory is a frozen wasteland; work is incentivized by promising the workers that one day they may be able to generate enough energy to make the surface inhabitable. In reality, though, outside the factory is a great domed city in which the upper classes live in luxury, with no fear of an unruly working class – ignorant of the city's existence – demanding their share of the planet's resources. SG-1 has had their memory re-programmed and been sent to work in the factory as punishment for criticizing this arrangement. With the help of the factory forewoman, SG-1 escapes and reveals the truth to the workers, who they promise to give a new home on a tropical planet. Here, the series attempts a critique of inequality under global capitalism, but by locating the narrative on an isolated planet with an insular economy not integrated into broader structures of capitalist production and exchange, the place of US economic policy in perpetuating such vast inequality is elided and instead the American heroes emerge as saviors of the oppressed rather than actors complicit in their oppression.

Toward the Virtual

In concluding my reading of *SG-1* with a discussion of the elision of embodied labor, I am touching on something that will become more central to *SG-1* in the seasons after the Goa'uld arc on which I have focused and that similarly animated other SFTV engagements with hypermobility technologies as well as broader cultural ideas: fantasies of disembodied hypermobility. Wormhole travel is, in *SG-1* as well as in series like *Babylon 5* and *Star Trek: Deep Space Nine*, a fundamentally physical and embodied phenomenon. That is, it does not

completely collapse transportation and communication, leaving a necessary tension between ideas about the movement of people and the flows of information. Other forms of hypermobility imagined in SFTV, however, attempted to transcend these tensions, and it is in this direction *SG-1* begins to move after the first seasons on which I have focused here. Following the collapse of the Goa'uld power structure, the narrative of *SG-1* turns to SGC's efforts to learn more about the Ancients, the race that originally built the stargate system. The Ancients, they discover, developed the ability to transcend their physical existence and now exist as pure energy. This fantasy of an existence unencumbered by physical restraints evokes cultural fantasies about hypermobility technologies that can be clearly seen in the contemporary imagining of inter-networks of digital media as "clouds." More immediately, however, these fantasies of disembodiment also point to another pre-occupation of 90s SFTV to which I turn in the next chapter: virtual reality.

Chapter 2

Virtually Mobile: Virtual Reality as a Technology of Hypermobility in *Star Trek: The Next Generation* and *VR5*

In the previous chapter, I discussed how digital television enabled a kind of virtual mobility for the viewer who could tap into the light-speed movement of digital signals and experience this flow represented in the near-instantaneous space travel of the characters in SFTV. Just as images and sound raced through a network of digital television equipment, the digital television viewer could turn on their TV and almost instantly traverse the galaxy, all from the safety of their living room. Virtual reality (VR) technology can perhaps best be understood as an extension of the virtual mobility offered by digital television. In a sense, the visual technologies that preceded and co-existed with VR had already worked to produce a kind of immersive virtual reality existing alongside people's physical reality. As Vivian Sobchack argues, "Television, video cassettes, video tape recorder/players, video games and personal computers all form an encompassing electronic system whose various forms 'interface' to constitute an alternative and absolute world that uniquely incorporates the spectator/user in a spatially decentered, weakly temporalized and quasi-disembodied state."[1] VR was specifically linked to television in the popular imagination as both were technologies that brought the domestic space into the external world. Lynn Spigel suggests that VR was "implemented as an improved form of 'new age' domesticity where people can literally enter another world while remaining

[1] Vivian Sobchack, "The Scene of the Screen: Towards a Phenomenology of Cinematic and Electronic Presence," *Post-Script* 10 (1990): 56

in the safety of their private homes."[2] In this sense, virtual reality could "outdo television by creating a more absorbing illusion."[3] Both a technological progeny of television and a reaction against what was perceived as the passivity of television, VR promised not only an increasing degree of immersion but also to bring interactivity and active control into the domestic space. If the virtual mobility provided by digital television was a largely passive one where viewers sat inactively as the television set transported them into space, VR promised its users active control over their virtual mobility. As William Boddy explains, VR was the most compelling of a whole set of digital imaging technologies in the 90s that "promise[d] to remake or destroy conventional television, to transform the scorned and degraded TV set into a good cultural object, to reinvest the pacifying, even feminizing, (in)activity of consuming television with fantasies of (masculine) agency and power."[4]

But VR was even more substantial than television in its implications for the production of space and mobility under advanced capitalism. VR emerged out of a complex of electronic network technologies that, in Scott Bukatman's words, created "an intensification of the dissolution of the boundaries between public and private realms, physical and electronic spaces."[5] VR is perhaps the most crucial technology in regards to the production of hypermobility as virtuality became a central modality and foundation for all other hypermobility technologies. If hypermobility consists in the nexus of global flows of information

[2] Lynn Spigel, *Make Room for TV: Television and the Family Ideal in Postwar America* (Chicago and London: The University of Chicago Press, 1992), 186.
[3] Ibid., 185.
[4] William Boddy, *New Media and Popular Imagination: Launching Radio, Television, and Digital Media in the United States* (Oxford: Oxford University Press, 2004), 70.
[5] Scott Bukatman, *Terminal Identity: The Virtual Subject in Postmodern Fiction* (Durham and London: Duke University Press, 1993), 105.

and the movement of physical bodies, VR represents the most explicit attempt to merge the two. VR presented hypermobility in its purest form as the light-speed flow of information within computer networks given a visual form providing an illusion of direct human interaction with technology and movement through the space of data. Indeed, as Oliver Grau suggests, VR might even be understood as the core medium of information society.[6] VR is emblematic of the ideology of global informational capitalism that takes information, rather than materiality, as the constitutional core of existence. It exemplifies a belief that N. Katherine Hayles identifies as "a defining characteristic of the present cultural moment," the "belief that information can circulate unchanged among different material substrates."[7] VR provides a window onto this world of information circulation, one understood as more fundamental than the world we interact with physically. As Hayles puts it, VR technologies "make visually immediate the perception that a world of information exists parallel to the 'real world'"[8] and that this information world thoroughly interpenetrates the real one. In a sense, then, VR's role in the production of hypermobility was to merge the two realms upon which hypermobility acted: the realm of physical bodies moving in material space and that of information flowing through cyberspace. This merger, however, was always destined to be an imperfect one riddled with tensions and contradictions as the very real difference in the speed of movement within these two realms continued to exist despite their seeming equality within virtual space. Ken Hillis insightfully recognizes this tension when he notes that while "capital, reformulated as infinitely

[6] Oliver Grau, *Virtual Art: From Illusion to Immersion* (Cambridge, MA: MIT Press, 2003), 3.
[7] N. Katherine Hayles, *How we Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago and London: University of Chicago Press, 1999), 1.
[8] Ibid., 14.

flexible data…move[s] at the speed of light across a variety of geographic scales, our embodied reality does not respond in as salutary of fashion to such ephemerality."[9]

As I have been arguing in this dissertation, it is this tension between embodied material mobility and the immaterial high-speed flows of information that is constitutive of hypermobility as a mode of mobility production. This tension, moreover, is at the heart of a crisis in the liberal humanist model of subjectivity and mobility produced by the new digital media technologies of hypermobility. Central to liberal humanist subjectivity has been the embodied subject's capacity for movement and control over its own mobility. In accelerating the mobility of information at a pace significantly higher than that of physical bodies, hypermobility presented a threat to the integrity of a liberal humanist subjectivity rooted in the control and capacity of physical mobility. At the same time, however, the accelerated mobility of information also represented a realization of the Enlightenment dream of consciousness liberated from the constraints of the physical body. Thus, there was a fundamental tension heightened here for liberal humanist subjectivity between the need for freedom of physical mobility on one hand and the liberation of immaterial consciousness on the other. VR technology attempted to resolve this tension through the reconstitution of the mobile humanist subject in virtual space wherein consciousness liberated from the body could find its control over mobility restored in a cyborgian merger of human and technology without a subsequent ceding of human control. The physical mobility crucial to the integrity of the humanist subject could be restaged in the virtual world where it continued apace with the

[9] Ken Hillis, *Digital Sensations: Space, Identity, and Embodiment in Virtual Reality* (Minneapolis and London: University of Minnesota Press, 1999), xxx.

hypermobility of information. The tensions of hypermobility between physical and informational mobility also generated a deep anxiety over the boundaries of the physical body. For the liberal humanist subject, the body constituted the boundaries of the subject and its integrity, an integrity threatened by the dispersal of subjectivity produced by digital media technologies. Here again, VR tried to assuage this anxiety through the promise of subjective integrity reconstituted in a virtual body traversing virtual space.

Also central to the crisis of liberal humanist subjectivity introduced by new technologies and negotiated by VR was the racialization and gendering of mobility. The mobile subject of liberal humanism, claimed as universal and thus supposedly not contingent on race or gender, was always predicated on an unstated assumption of the universal subject as white, male, and heterosexual. Whiteness and hetero-masculinity became the default position for the mobile subject. The crisis of liberal humanist subjectivity was also a crisis in this taken for granted whiteness and hetero-masculinity of the humanist subject, particularly as it coincided with the political struggles of those who fell outside of this model for recognition and access to the privileges previously afforded only to normative subjects as well as broader challenges to the epistemic hegemony of liberal humanism. Anxieties over the dissolution of bodily boundaries and the subjective capacity for physical mobility were thus also anxieties over the integrity and hegemony of the white hetero-masculine liberal subject. For marginalized groups, the implications of hypermobility and VR were complicated. On one hand, the destabilization of liberal humanist subjectivity by new technologies opened up new possibilities for the subjectivity and political agency for these groups. On the other, however, the operations of VR in attempting to reconsolidate liberal humanist subjectivity threatened to re-enshrine the

hegemony of the normatively racialized and gendered subject, further marginalizing non-white and non-male subjects while at the same time proclaiming the irrelevance of racial and gender categories tied to the physical body.

Despite VR's attempts to resolve the tensions and anxieties introduced for liberal humanist subjectivity by new digital media technologies, these tensions nevertheless reemerged in new forms that become visible in SFTV's engagement with VR. While much of the celebratory discourse around VR tried to erase these tensions through either proclaiming the obsolescence of the physical body and the transcendental nature of consciousness or pointing to an inevitable and seamless merger of human bodies and technology in a cyborg future,[10] explorations of VR technologies in 1990s SFTV provide a more nuanced and complex examination of the tensions between physical and virtual mobility. In this chapter, I embark on a reading of two vastly different imaginative representations of VR in SFTV to show how they illuminate cultural anxieties and tensions around the development of VR technology and its place within the broader production of hypermobility. First, I look to the series *Star Trek: The Next Generation* (*TNG*) and its imaginative exploration of VR technologies in the form of the holodeck, one of the most prominent and persistent fictional figurations of VR technology and

[10] Much of this celebratory discourse on VR can be found in the pages of the publications *Mondo 2000*, which began publication in 1984 and ran through 1998, and *Wired*, which premiered in 1993. Public figures including Jaron Lanier, Timothy Leary, and John Perry Barlow also contributed significantly to the popularity of these ideas. One of the earliest critiques of this discourse can be found in Vivian Sobchack's 1991 article in *Artforum* on *Mondo 2000*. Vivian Sobchack, "New Age Mutant Ninja Hackers," *Artforum* (April 1991). For further critiques, see Bukatman, Boddy, Hillis, and Robert Markley, "Introduction: History, Theory, and Virtual Reality," in *Virtual Realities and their Discontents*, ed. Robert Markley (Baltimore and London: John Hopkins University Press, 1996). While it does not engage directly with the discourse around VR, Hayle's critique of posthumanist ideas also provides a useful exploration of the ways in which the discourse on new media technologies participated in a problematic celebration of disembodiment.

one that continues to animate popular ideas about VR technology in the present era.[11] I then turn to the considerably lesser-known and shorter-run series *VR5*, whose fictional representation of VR primarily takes the form of VR5, a VR technology that makes use of a head-mounted display unit (HMD) to transport its users into a fully immersive virtual environment. I argue that while both series dwell on similar tensions and anxieties surrounding cultural fantasies about VR, the different forms VR technologies take in the two series and the distinctions in their narrative and visual explorations of these technologies and the social, economic, and political context in which they exist provide quite different insights into the ideological operations inherent in the cultural imagining of VR. Specifically, the series diverge in two key ways. The first of these is in their examinations of embodiment and consciousness. While *TNG* more prominently centers the physical body in its explorations of VR, *VR5* dwells much more on the implications of VR for human consciousness and subjectivity. The second key difference lies in the extent to which the series work to resolve the tensions they make manifest of the liberal humanist subject within hypermobility. For its part, *TNG* tends towards narrative conclusions that resolve these tensions in favor of an ultimately triumphant hypermobile embodied human subject who is able to overcome the contradictions between physical and virtual mobility. *VR5*, on the other hand, allows these tensions to linger unresolved, leaving a more provocative opening for exploring the continuing anxieties about a

[11] For examples of the holodeck's persistence in the cultural imagination around VR, see Fabio Zambetta, "Star Trek's Holodeck: From Science Fiction to a New Reality," *The Conversation*, last updated March 28, 2017, http://theconversation.com/star-treks-holodeck-from-science-fiction-to-a-new-reality-74839 and John Gaudiosi, "The Void: Becoming the IMAX of Virtual Reality," *Time*, November 2015. Technology company NVIDIA recently announced a new VR project titled "Project Holodeck" inspired by TNG's holodeck. David Weinstein, "NVIDIA Reveals Holodeck, Its Groundbreaking Project for Photorealistic, Collaborative VR," *NVIDIA*, last updated May 10, 2017, https://blogs.nvidia.com/blog/2017/05/10/holodeck.

hypermobile future. However, while tensions around gender become evident in the centrality of the VR adventures of a female character in *VR5*, there is a structuring erasure of racialized hypermobility in both series that points to the persistent hegemony of whiteness in the realm of VR technologies.

In understanding the differences between the two series engagement with VR, hypermobility, and the crisis of liberal humanist subjectivity, it is perhaps useful to contextualize the reception and success of the two series. *TNG* enjoyed a built in audience of *Star Trek* fans familiar with the franchise and nostalgic for the adventures of the original *Star Trek* series of the 1960s (*TOS*). *VR5*, on the other hand, as an original series outside of an existing franchise, had a much harder time finding popular success. *VR5* suffered from low ratings and some slight mishandling by Fox, which aired only 10 of the series' 13 episodes, and was cancelled after only one season without much backlash. Part of this may be due to the series' low budget, which did not allow it to take advantage of the enhanced visual quality of digital television, making the VR sequences in particular somewhat unimpressive in relationship to other SFTV series of the period. Series executive producer Thania St. John noted that the series was trying to capture the "creepy feeling" of the highly successful X-files.[12] While this dark and creepy atmospherics seemed to work for a series about alien conspiracies, it appeared less successful in dramatizing the increasing popular interest in VR. The popularity of *TNG*'s representations of VR on the other hand – several holodeck-centric episodes consistently make lists of fan and critic favorite episodes[13] – might be understood as due to its more vibrant visual

[12] Ziff Davis, "VR, a Trip into Cyberspace," *Electronic Gaming Monthly*, January 1995: 272.
[13] Aaron Couch and Graeme McMillan, "'Star Trek: The Next Generation' – The 25 Greatest Episodes," *The Hollywood Reporter*, last updated September 21, 2016, https://www.hollywoodreporter.com/lists/star-trek-next-

representations of virtual space and optimistic view of VR's possibilities that tapped into more utopian hopes for the technology.

Indeed, I would argue that the success of *TNG* in contrast to *VR5* can perhaps be best understood in terms of the divergence in their engagement with VR and the anxieties over hypermobility. *TNG*'s reconsolidation of liberal humanist subjectivity within VR provided a more hopeful imagining that assuaged fears about new technologies of hypermobility and their threat to the hegemony of the liberal humanist subject and thus was immediately more appealing to a popular audience seeking assurance about the uncertain future that hypermobility might bring, while *VR5* largely refused to mollify these anxieties through any kind of reconsolidation of this subject. However, despite its relative unpopularity in comparison to *TNG*, *VR5* is nevertheless useful in the way it brings to light submerged fears in the popular consciousness that could not easily be overcome, and these less acknowledged ideas present an insightful contrast to those of *TNG*.

The first section of this chapter, then, focuses on *TNG* and the holodeck, exploring the way in which the series highlights the anxieties over the physical body and physical mobility in relation to technologies of virtual mobility. Here, I pay particular attention to how the series conceptualizes the interlinking of technologies of physical and virtual mobility within the production of hypermobility. In the next section, I turn to a reading of *VR5*, examining how its engagement with the tensions around embodiment and hypermobility converges and diverges

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generation-episodes-930854/item/conspiracy-star-trek-100-924833; Scott Thill, "Best Star Trek: The Next Generation Episodes, According to You," Wired, last updated October 19, 2012, https://www.wired.com/2012/10/star-trek-tng-readers-best-worst; "The Best Star Trek: The Next Generation Episodes," Ranker, accessed March 20, 2018, https://www.ranker.com/list/best-star-trek-the-next-generation-episodes/reference.

with those of *TNG*. Finally, in the third section, I explore in more detail the implications of the different ways in which the two series deal with VR, considering how each contributes to a more complex understanding of how VR works within the production of hypermobility under late global capitalism.

Virtual Reality, Virtual Environments, and Cyberspace

First, however, it is important to briefly explain the terms I use in this chapter to talk about VR. The term "virtual reality" itself is somewhat ambiguous as it has been used to refer not only to the immersive environments enabled by head-mounted displays or CAVE (Cave Automatic Virtual Environment) technologies but also to the virtual interactions that people engage in on the Internet, whether these interactions occur via specialized VR equipment (e.g. HMDs, data gloves,[14] etc.) or simply via a typical mouse and screen interface at an internet-connected computer terminal. Moreover, there is a certain amount of slippage between "virtual reality" and "cyberspace." Ideas about VR that came to the fore in the 90s owed a lot to the concept of cyberspace that emerged in the 80s as a way to talk about the sphere of global electronic information exchange. In popular discourse, cyberspace was a way to refer to the virtual space of the Internet, while in cyberpunk SF, cyberspace became a space that could be entered by human characters and where they could visualize global flows of data and capital

[14] A dataglove is a wearable device that allows the user to manipulate objects in VR as they would if they were interacting with a physical object.

and interact with computer intelligence.[15] Marcos Novak provides a useful definition of cyberspace that links these two notions:

> [Cyberspace is a] spatialized visualization of all information in global information processing systems, along pathways provided by present and future communications networks, enabling full copresence and interaction of multiple users, allowing input and output from and to the human sensorium, permitting simulations of real and virtual realities, remote data collection and control through telepresence, and total integration and intercommunication with a full range of intelligence products and environments in real space[16]

Moreover, Novak's definition here, in invoking "the human sensorium," simulations of real and virtual realities, and "telepresence" moves from a broader conceptualization of cyberspace to one that more specifically points to VR technologies, linking the earlier notions of cyberspace as a metaphor for the Internet, cyberpunk's visualized imagining of cyberspace, and the developments in VR technologies that were taking place in the 90s.

What the cyberpunk fiction of writers like William Gibson did was to extrapolate from the actually existing text-based ecology of cyberspace to imagine a world in which users could enter into this space, accessing and interacting with it in a visual and tactile way. VR was the real-world realization of this fiction, a technology that produced a visual and immersive interface between the human user and vast networks of information. As Bukatman notes, "[t]he lack of a vision adequate to the electronic datasphere has led to a set of allusive attempts to reconstitute the space of the computer in human – biological or physical – terms."[17] VR, it seemed, fulfilled the call for this vision, presenting the world of data to human users in visual

[15] The term "cyberspace" first emerged in SF in William Gibson's 1982 short story "Burning Chrome" and later in his 1984 novel *Neuromancer*.
[16] Qtd. In Hillis, xiv.
[17] Bukatman, 109.

form just as Gibson's fictional cyberspace Matrix had done for the console cowboys of *Neuromancer*.

Thus, I use the term "cyberspace" in this chapter to refer more broadly to the space of global information exchange, whether or not virtual reality technologies are explicitly involved. I use VR, on the other hand, to refer specifically to technologies like HMDs that permit a fully immersive experience in cyberspace. Another important distinction to mark is that between VR and virtual environments (VE). While these two terms are sometimes used interchangeably, I follow Hillis here in understanding VR as "an individual experience constituted within technology…[that] draws together the world of technology and its ability to represent nature, with the broad and overlapping spheres of social relations and meaning." VEs, on the other hand, are "representational spaces that propose particular spatial illusions or fantasies."[18] Put somewhat differently, VR, in my usage, refers to the interaction of user and technology that permits the creation of a VR experience, while VEs refer to the particular scenes or spaces created within VR.

Navigating the Holodeck

Star Trek: The Next Generation [*TNG*] takes place in a generally utopian 24th century, in which humanity has evolved beyond the geopolitical conflicts and economic inequality that mark our present era and have succeeded in developing faster than light (FTL) warp-speed travel technologies. A united Earth, in partnership with various alien races, has formed the federation, an interplanetary democratic governing body. Most importantly for *TNG*, the

[18] Hillis, xv.

Federation includes a space-travel arm called Starfleet dedicated to the peaceful exploration of space in search of scientific knowledge and establishing friendly contact with new species. Most of the action of *TNG* takes place on the *Enterprise*, the flagship of Starfleet. The *Enterprise* is captained by Jean-Luc Picard, and its senior officers, who make up the central characters of the series, include Commander William Riker, Picard's second in command, Lieutenant Commander Data, an Android with a positronic brain capable of emulating human behavior as well as processing vast amounts of information, security Lieutenant Worf, the first Klingon to join Starfleet, engineering Lieutenant Geordi LaForge, Doctor Beverly Crusher, and Deanna Troi, the ship's counselor. In the next chapter, I explore in more detail the world of *TNG*. My interest here, however, is more narrowly in a specific technology the series introduces: the holodeck, an immersive virtual reality technology that provides recreational opportunities for crewmembers as well as more practical uses in crew training. The holodeck makes frequent appearances throughout the series and there are many episodes that center entirely on the holodeck. What is most interesting about the holodeck is the way in which it complicates many of the cultural fantasies around VR that understand it as a disembodied, immaterial experience. Before exploring the specific ways the holodeck engages in questions about the relationship between physical and virtual mobility, I want to briefly explore the popular and academic conversations around VR technology in the 90s through which I develop my own understanding of VR as a product of developments in hypermobility.

Various critics have noted that the popular ideology around VR involved fantasies of disembodied consciousness escaping the material constraints of physical existence and inhabiting a realm of pure information, represented in visual form. Hillis, for instance, in his

critique of the ideology surrounding VR, argues that "[VR's] development is inflected by a desire on the part of a disembodied, alienated subjectivity for transcendence from bodily limits."[19] For Hillis, VR represents a desire to escape from the messiness of the natural and physical world, as well as from history, and create a virtual world that submitted itself easily to mechanisms of human social control. These fantasies of a disembodied escape on the part of human consciousness from the material world also entailed a flight from the political struggles of this world. VR luminary Jaron Lanier, for instance, saw in VR the possibility to leave behind social distinctions based on categories of race or gender. VR, he argued, "is the ultimate lack of race or class distinctions or any other form of pretense, since all form is variable."[20] Such ideas about the erasure of social categories rested on a denial of the material conditions that produced these categories and resulting politics. As Vivian Sobchak argues, these fantasies of VR enthusiasts presented "a potentially dangerous and disturbingly miscalculated attempt to escape the material space and specific politics…of the body's mortality and the planet's fragility."[21] In addition to being fueled by a desire to leave behind the messiness of the material world, VR also presented a perceived opportunity to upgrade human consciousness in response to the development of a society increasingly based around information technology. Bukatman suggests that fantasies of escaping into the virtual world of cyberspace were a product of an attempt to reassert human subjectivity in a world in which its centrality was threatened by the increasing ubiquity of cybernetic systems of control.[22] Human control, and particularly the

[19] Hillis, 1-2.
[20] Qtd. In Boddy, 72.
[21] Sobchack, "New Age," 24.
[22] Bukatman, 16.

control of the liberal humanist subject, was threatened by new technologies that decentered this control and dispersed it through cybernetic networks outside direct human control. VR presented the opportunity for the liberal humanist subject to regain control in virtual form, thus representing a paradoxical attempt to re-inscribe sovereign human subjectivity through the merger of human consciousness with cyber technologies. The integrity of human subjectivity previously located in the physical body would be reconstituted in the virtual realm. VR offered the fantasy of disembodied consciousness freed from the body without sacrificing the integrity of the liberal humanist subject.

What is of particular interest to me, however, is the way in which problems of embodiment and disembodiment in fantasies surrounding VR technologies dovetail with questions of space, motion, and mobility under the conditions of late global capitalism. Fantasies of disembodied existence in VR should, I suggest, be understood in relationship to the shifting production of mobility within late global capitalism occurring in the 1990s. While Hillis argues that VR's promise of virtual mobility existed in opposition to a decrease in physical mobility as people increasingly interacted with the world from a stationary position behind a computer screen,[23] I would suggest that the situation was more complicated. The enabling of both virtual and physical mobility, I argue, must be understood as interrelated within the broader production of mobility under the conditions of late global capitalism. This mode of mobility production is what I have termed hypermobility. Hypermobility entails something of a dual-pronged operation. On one hand, it involves enabling the ever-accelerating movement of information and capital around the globe, while on the other it also produces a general

[23] Hillis, XV

acceleration in the rate of physical mobility. However, it does so in a way that is highly uneven and stratified, producing a hierarchical mobility in which global elites experience the freedom of global movement while others experience a mix of enforced immobility and compelled mobility in the form of economic migration and flight from war and environmental destruction. In a real sense, physical bodies have become more mobile, but this mobility is a far cry from the democratic and egalitarian hypermobility proclaimed by the celebrants of capitalist globalization, and the electronic mobility claimed by VR replicates this elision of the inequitable and often devastating production of hypermobility. At the same time, however, VR presented something of an imminent critique of hypermobility in working to produce a desire for freedom of movement afforded to info-capital but unfulfilled for human subjects. Simply put, VR technologies offered the possibility of human consciousness disconnecting from the material constraints of physical bodies and experiencing the unfettered virtual movement afforded to global flows of info-capital. This possibility was, however, always a limited one. Understanding VR's debt to the concept of cyberspace and its imaginative depiction in cyberpunk is helpful in pointing to one of the central contradictions inherent in the idea of VR as a vehicle of freedom for human consciousness unencumbered by its embodiment. William Gibson famously defined cyberspace as a "consensual illusion,"[24] a notion that has led celebrants of VR to stress the democratic and egalitarian nature of participating in a consensual illusion. However, as Hillis points out, Gibson's notion of "consensual illusion" refers to the freedom of information, not

[24] In *Neuromancer*, Gibson defines cyberspace as "[a] consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts... A graphic representation of data abstracted from banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data." William Gibson, *Neuromancer* (New York: Berkley Publishing Group, 1989), 128.

people, to produce cyberspace.[25] This is to say that the virtual hypermobility enabled in cyberspace allowed for the free and unencumbered mobility of information while producing a more constrained and unequal mobility for human users. Thus, the promise of freedom offered by VR is in reality only available to the information that travels freely through the global datascape not in fact to the users who are subject to these flows, even as they fantasize control over them through their experiences in VR.

However, there remains an assumption here that VR was in fact, and was understood as, purely a technology of disembodied mobility. I would argue, however, that the relationship between embodiment and disembodiment, materiality and immateriality within the development of VR is shot through with the same tensions between physical and virtual mobility indicative of the broader production of hypermobility. This becomes evident in a relationship between physical bodies and virtual environments that is more complex than a simple leaving behind of the body. Anne Friedberg notes that there is a paradoxical bodily presence in the use of VR technologies involving a split between the physical and phenomenal body.[26] While the physical body remains in the material world, the phenomenal body interacts with the virtual world. Thus, the entrance into a virtual environment is not a purely disembodied adventure but one marked by the liminal presence/absence of the body. Furthermore, as Robert Markley argues, the notion of VR as a disembodied experience forgets the division between cyberspace as a virtual realm and virtual technologies as material

[25] Hillis, 22.
[26] Anne Friedberg, *Window Shopping: Cinema and the Postmodern* (Berkley and Los Angeles: University of California Press, 1993), 143.

interfaces with physical bodies.[27] VR, and hypermobility technologies more broadly, thus operates through a dialectical interplay of physical and virtual bodies, spaces, and movement.

It is here that the holodeck of *TNG* becomes particularly relevant as it works to illuminate this dialectical interplay of physical and virtual mobility involved in VR. I argue that the holodeck actually complicates utopian fantasies of VR as the free movement of disembodied consciousness and highlights the tensions between physical and virtual mobility that are constitutive of hypermobility. The technical operation of the holodeck itself demonstrates a marked contrast with popular fantasies of disembodied mobility. Unlike VR technologies of the time in which the user peered into a virtual world via an HMD, with their physical body replaced by a virtual avatar, the user of the holodeck entered the virtual environment with their own physical bodies which interacted directly with the holographic environment. The holographic images themselves were also not entirely immaterial. As Picard explains in the episode "Elementary, my Dear Data" the holographs exist simultaneously as matter and energy. Thus, the virtual environment of the holodeck takes on a kind of liminal materiality. This liminal materiality seems an apt metaphor for the flows of information within the systems of global capital. While these flows may take on a seemingly immaterial existence, they are enabled within specific sets of material conditions and they have a real material impact on the physical bodies of people. Flows of credit may be virtual, but the economic inequality they help produce is manifest in the physical conditions of a global underclass. As Hillis notes, virtual environments enact a representation of pure information exchange in a way that

[27] Markley, 2.

produces an illusion of its own system of production.[28] Through foregrounding the necessarily liminal materiality of virtual environments, the holodeck to an extent refuses the perpetuation of this illusion.

The holodeck is also thoroughly integrated with technologies of physical mobility. The holodeck doesn't exist in a stationary setting but rather within the perpetually mobile space of a hyper-speed enabled starship. The ship's computer that controls the holodeck is the same computer system that controls navigation and propulsion. Moreover, in multiple instances, we see that actions taken within the virtual environment of the holodeck directly affect the physical mobility of the ship. One example comes in the aforementioned episode, "Elementary, my Dear Data." In an attempt to provide an adequate challenge for Data's mystery solving skills, Lt. Geordi LaForge programs the holodeck to create an adequate foe for Data within Data's Sherlock Holmes holoprogram. The foe is, of course, no other than Professor Moriarty, Sherlock Holmes' arch-nemesis. The challenge extends further than expected, however, when Moriarty becomes self-aware of his status as a hologram and gains access to the ship's systems. In an attempt to force Picard to give him a real existence outside the holodeck, he is able to interface with the computer and cause disruptions in the movement of the *Enterprise*. In one scene, when Picard and LaForge journey into the holodeck to confront Moriarty, Moriarty demonstrates his power over the ship's mobility by manipulating a control console that causes interruptions in the ship's movement. The scene intercuts between Moriarty's operation of the console and images of the bridge as the ship continuously halts and regains movement. Here, we see that the physical mobility of the *Enterprise* and the virtual mobility afforded by the

[28] Hillis, 204-5.

holodeck are not separate but are in fact inter-connected within a broader technical system of mobility production.[29]

Moriarty reappears to once again threaten the mobility of the *Enterprise* in season 6's "Ship in a Bottle." In the episode, Lieutenant Reginald Barclay accidently releases Moriarty from his storage in the holodeck's memory. Moriarty, who desires to leave the holodeck and exist as a real human, attempts to force Picard to find a way to give him a material existence. Early in the episode, Moriarty appears to exit the holodeck without vaporizing and medical scans show him to be a normal human. However, we soon learn that this action is actually taking place in the holodeck, as Moriarty has constructed a simulation of the *Enterprise* fully within the holodeck. Meanwhile, Moriarty has once again seized control of the ship from within the holodeck and has contacted Riker, who is on the bridge of the actual *Enterprise*, refusing to relinquish control until the crew finds a way to give him human form. Trapped in the holodeck, Picard is unable to regain his control over the ship or to contact Riker and must devise a way to trick Moriarty into relinquishing control. Using the transporter, Picard convinces Moriarty he has been transported onto the actual ship and he sends Moriarty and his lover, Regina, away on a shuttlecraft. Moriarty believes that he has gained humanity and his freedom, signified by the physical mobility afforded by the shuttlecraft. However, Picard has actually trapped Moriarty within a holodeck simulation, which he removes from the holodeck memory and places inside an external memory cube. The episode, with its multiple layers of VEs, produces a blurring of

[29] Moriarty's seizure of control over the ship's mobility also speaks to an emerging anxiety about artificial intelligence (AI). While outside of the Sherlock Holmes episodes, AI is not persistently linked to the virtual mobility of the holodeck, we can nevertheless see that fears of ceding control over physical mobility to digital networks of information flows were connected to cultural anxieties about AI overtaking the dominant position of the human subject.

the lines between real and virtual environments and between materiality and informational simulation. In this way, it goes even further than "Elementary, my Dear Data" in exploring the anxieties around an increasingly cybernetic existence in which the boundaries between physical and virtual mobility are increasingly porous. In the final scene, Picard suggests that perhaps the ship and its crew might even exist in some large-scale virtual simulation, questioning the ontological certainty on which the determination of the *Enterprise* as existing within the real world is founded.

Furthermore, the physical body and physical mobility are in fact at the center of many of the stories involving the holodeck. Despite popular ideas about VEs providing an environment safe from physical harm, episodes involving the holodeck on *TNG* often center on physical threats to the characters when the holodeck malfunctions. In one of the first holodeck-centric episodes, season 1's "The Big Goodbye," Picard and several other characters find themselves trapped in Picard's Dixon Hill holoprogram – a program based on the adventures of a fictional private eye in the early 20th century – with the safety guards turned off. After a confrontation with some enemies of Hill, one of the crewmembers, Mr. Whalen, is shot and sustains serious injuries. Similarly, in season 5's "A fistful of Datas," the holodeck malfunctions after an attempt to integrate the android Data's systems with the ship's computer. Commander Worf and his son, along with counselor Troi, suddenly find themselves in real physical danger when they are unable to stop the wild-west holoprogram they are in and the safety controls are once again turned off. Likewise, in the beginning of season 5's "Conundrum," we find a crewmember in the medical bay who has sustained an injury to their arm after engaging in a cliff-diving program in the holodeck. In these instances we find that anxieties over threat to physical bodies presented

by VR registers the deep tensions between the unencumbered virtual mobility of information and the heavily regulated mobility of physical bodies.

These different strands regarding the physicality of virtual environments come together in one particularly interesting episode involving the holodeck. In the episode "The *n*th Degree," Barclay, after coming into contact with an alien technology, is suddenly endowed with extreme intelligence. When the *Enterprise* subsequently finds itself experiencing dangerous malfunctions in the warp drive, Barclay heads to the holodeck where he creates a virtual neural interface that links his brain directly to the ship's computer. The link will allow him, he claims, to alter the ship so that it can travel at speeds multitudes beyond its current limits. In one scene, Picard confronts Barclay on the holodeck where he is fully linked into the ship's computer. Picard wants to stop Barclay from carrying out the experiment by disconnecting him from the computer, but Barclay warns him that his mind has become so interlinked with the computer that severing the link would kill him. Several insights regarding the series' imagining of VR technology are revealed here. For one, we find another instance in which the virtual environment of the holodeck endangers the physical safety of the user. While the aliens that gave Barclay his momentary genius return him to normal after he pilots the ship to their location, it is clear that without this intervention Barclay would not have survived being de-linked from the virtual interface. Beyond the simple threat of physical danger introduced by the link, however, Barclay's situation also challenges the notions of human mastery surrounding VR that misconstrue the two-way relationship between humans and technology. Sobchack argues that VR enthusiasts desire to merge with computer technology without themselves being

changed by that technology.[30] Barclay's merger with the ship's computer via the holodeck belies the impossibility of this fantasy. His physical body and consciousness no longer exist in their previous state but have become, at least seemingly, irrevocably changed by their interaction with the ship's computer via the interface of the holodeck. However, it should be noted here that Barclay's condition is temporary and he is restored to his previous state by the aliens. Thus, even while the series here recognizes a fundamental alteration in the human body when interfaced with VR technologies, these alterations are ultimately undone by the episode's narrative, which seems to reinforce a persistent faith that humanity can always re-assert itself over the becoming-cyborg effected by VR technologies, a faith in the permanence of the humanist subject crucial to the *ST* franchise's vision of a future founded on the persistence of liberal humanism in a post-capitalist hypermobile universe.[31] Finally, the episode again underscores the inter-connectivity between technologies of physical and virtual mobility. Through Barclay's use of the VR technology of the holodeck, the *Enterprise* is able to travel thousands of light years in a matter of seconds.

The connection between the physical mobility of the *Enterprise* through space and the virtual mobility of the holodeck becomes even more explicit in Season 7's "Emergence." The episode centers on the attempts of the characters to solve the mystery of malfunctions in the holodeck that seem to coincide with malfunctions in the ship's navigation. While multiple holodeck programs appear to be running simultaneously without explanation, the ship is

[30] Sobchack, "New Age," 26.

[31] Thus, while *ST* seems able to imagine a future beyond a capitalist social system, it is only capable of imagining this future within the constraints of a liberal humanist model of subjectivity that is a central product of this system. Put somewhat differently, ST is only able to imagine the obsolescence of the specific economic mechanisms of capitalism without abandoning the model of subjectivity central to the maintenance of capitalism as a social system.

jumping into warp and changing direction unexpectedly on its own without the crew's input. The crew discover that the ship seems to be forming an emerging intelligence and has created a series of new electrical nodes, all linked in holodeck 3, allowing this new intelligence to link the ship's systems. Data theorizes that the holodeck is serving as a "processing center" and "imagination" of the ship's emergent consciousness, and the senior officers head into the holodeck to try and figure out how to regain control of the ship. In the holodeck, this effort is represented as taking place aboard the *Orient Express*. Situating the interactions on a train of course serve to further reinforce the links between physical and virtual mobility, but the links are more direct than they at first appear. As Data notes, "what happens on the holodeck has a profound effect on the ship." Indeed, we discover that the movement of the *Orient Express* serves as a holographic representation of the movements of the *Enterprise* itself. In one sequence, scenes of disruptions in the journey of the train are intercut with the Enterprise's sudden jumps into warp, and LaForge and Data discover that when the train changes direction in the holodeck, the *Enterprise* changes direction as well. Moreover, when the ship begins to lose structural integrity, there is an earthquake in the holodeck. The telos of the ship's journey is itself represented in that of the *Orient Express*'s journey. The *Express* is trying to get to "Vertiform City," just as the ship is in search of Vertion particles. In these interlinkages between the virtual mobility of the holodeck and physical mobility of the *Enterprise*, the holodeck becomes the ship's waking daydream, playing out its thought process symbolically in the holodeck's virtual environment. More significantly, however, it becomes an interface between the ship's consciousness and the human crew, just as VR technologies in the real world were

beginning to provide an interface between the human user and the world of computer intelligence.

While TNG centers the human body in its explorations of the holodeck, it is important to recognize that it is almost always male bodies that are at stake. This points to the way in which *TNG* tends to reproduce in somewhat altered form the masculinist ideologies that underlie many of the popular fantasies about VR. The claims by VR celebrants like Lanier that VR can level social differences through the erasure of the physical body belie the way in which this erasure actually re-inscribes the assumption of a white, male, heterosexual subject that is afforded the virtual mobility enabled by VR technologies. Indeed, VR technologies and the virtual environments they produce are inherently gendered and raced. Hillis notes how virtual environments, often modeled on military simulations of controlled spaces, present a heavily masculinized landscape.[32] Virtual mobility thus becomes a masculine domain where mobility is conceptualized in terms of the active male user's conquering and control of virtual space. The production of mobility has, at least in Western capitalist society, always been heavily gendered, and virtual mobility is no exception.

As feminist SF critics have pointed out,[33] the fantasy of disembodiment, of leaving the "meat" behind, that animated cyberpunk's explorations of cyberspace, works to erase the bodies of women and ignore the oppression of those bodies. As Anne Balsamo argues, there is

[32] Hillis, xxvii

[33] See, for example: Rosi Braidotti, "Cyberfeminism with a Difference," in *Futures of Critical Theory: Dreams of Difference*, eds. Michael Peters, Mark Olssen, and Colin Lankshear (Oxford and New York: Rowman and Littelfield, 2003): 239-60; Ceylan Ertung, "Bodies that [don't] Matter: Feminist Cyberpunk and Transgressions of Bodily Boundaries," *Journal of Faculty of Letters* 28, no. 2 (December 2011): 77-93; Sharon Stockton, "'The Self Regained": Cyberpunk's Retreat to the Imperium," *Contemporary Literature* 36 (1995): 588-612; Amanda Fernbach, "The Fetishization of Masculinity in Science Fiction: the Cyborg and the Console Cowboy," *Science Fiction Studies* 27, no. 2 (July 2000): 234-255

a "repression of the body" that takes place in cyberspace, both in its real and fictional forms. Despite claims that VR can liberate individuals from the constraints of gender, Balsamo demonstrates how "VR technologies articulate cultural narratives about the techno-body so that these technologies have the effect of naturalizing a gendered body phenomenon."[34]

All of TNG's narratives centered on holodeck adventures focus primarily on the journey of male characters in virtual space. While Counselor Troi and Dr. Crusher, the two main female characters in the series, are often part of these adventures, they occupy secondary roles for the most part. For example, in "Elementary Dear Data," Dr. Crusher is kidnapped by a holographic version of Professor Moriarty, Sherlock Holme's infamous nemesis in Arthur Conan Doyle's novels, so that Moriarty can get the attention of Captain Picard. While Crusher does not play the part of the damsel in distress – in fact, she refuses to take Moriarty seriously and, when Picard and Data arrive, she simply remarks on how much she was enjoying the crumpets that her host was feeding her – it is nevertheless the efforts of Picard and Data in the holoprogram to neutralize the threat posed by Moriarty that are the focus of the episode's narrative.

Notably, the female characters that play a more central role in holodeck narratives are not real female members of the ship's crew but programmed holo-characters. These simulated women often serve as romantic conquests for the real male characters. In the episode "Booby Trap" after LaForge's holodeck date with a crew member is unsuccessful, he falls in love with a holodeck simulation of one of the engineers that built the *Enterprise*. Unlike the physical woman, this virtual woman returns LaForge's affections and the two end up kissing. While LaForge deletes the program after the kiss, he does it out of a fear of becoming addicted to a

[34] Anne Balsamo, *Technologies of the Gendered Body* (Durham and London: Duke University Press, 1996), 123.

technological fantasy. The moral of the story is thus not that there's any problem with the gendered dynamics at play in LaForge's attempts at romantic conquest but rather that there is a danger in becoming addicted to the fantasies provided by VR technology. This framing also operates to gender the threat of addiction to VR fantasies as feminine. The space of VR, coded as feminine in this instance, becomes a threat to the male user's control over their own physical and mental well-being and thus their ability to maintain active conscious control over their physical and virtual mobility.

In one of the series' first holodeck-centric episode, season 1's "11001001," Commander Riker designs a program of a 1920's New Orleans Jazz Club, complete with a backing band to accompany his saxophone performances. Riker notes there is something missing, however, and replaces the audience with a "sultry" female. The implication is that this woman will be the object of Riker's seductions. Thus, the virtual space of the club becomes a space wherein a fantasy of male power and virility can be plaid out. The fantasy does not play out as straightforwardly as we might expect, however. Riker becomes enamored with Minuet, the holographic woman, and senses a deep emotional connection with the character. He notes that the program seemed to have somehow interfaced with his subconscious as Minuet is uniquely able to tap into his unconscious desires. Of course, there is a twist here. It turns out that Minuet was actually programed by the Bynars, an alien species deeply interconnected with their planet's computer technology – so much so that they speak to one another in binary code – in order to distract Riker and Picard while they commandeer the ship in order to travel to their home planet and persuade the *Enterprise* to assist with a problem there. Interestingly here, Riker's VR-enabled fantasy of male dominance is played against him in order to keep him

and Picard on the holodeck, disabling their control over the physical mobility of the ship. The episode thus seems to subtly subvert the association of virtual mobility with masculine power, rendering the male characters as passive victims in their holodeck adventure.

What we see in these instances is that the anxieties *TNG* registers about the physical body in VEs are fundamentally anxieties about the power and mobility of the male body. As I have noted, hypermobility technologies presented a threat to the integrity of the masculine subject of liberal humanism, and here this threat takes physical form as a danger to the mobility of the body that serves to delimit this subject. To return to "1001101" we can see in Riker's entrapment on the holodeck by the Bynars as a threat to his physical mobility. Riker and Picard are no longer in control of the ship's mobility nor their own physical mobility. The narrative resolution of the episode, in which Riker and Picard discover the Bynar's plans, help them restore their homeworld, and return the ship successfully to the starbase, ensures that the two male characters ultimately regain their control over their own physical mobility as well as that of the ship. In this figuration, then, the threat posed to Picard and Riker resonates with the connection Claudia Springer recognizes in the 90s between anxieties about technologies and a crisis in masculinity.[35]

The gendered constructions of VR in *TNG* remind us that the crisis of the body in virtual mobility is moreover also a crisis of the subject. Bukatman notes that, as with previous technological shifts, in the digital age, "a desire for the extension of power that technologies permit is accompanied by the concomitant fear of a loss of power and the weakening of human

[35] Claudia Springer, "The Pleasures of the Interface," *Screen* 32, no. 3 (1991): 318.

control."[36] The result is a profound anxiety about the "dissolution of boundaries and the electronic challenge to subject definition."[37] In the midst of this cultural anxiety, VR seems to provide a form for reasserting subjective control over a digital existence. VR presents a fantasy of ontological authorship wherein human users can exist in a totally controllable environment, merging with machine consciousness without conceding their individuality but rather embracing the flexibility of this individuality in cyberspace.

In light of this cultural crisis of the subject and VR's response to it, it is useful to think about how *TNG* engages with questions of subject-formation in relation to the virtual mobility offered by the holodeck. In *TNG*, the imagining of virtual environments as a completely life-like environment which users enter and emerge from with their own intact bodies seems to suggest that the encounter with VR technologies can leave human subjectivity unaltered. We don't find the characters greatly changed by their experiences on the holodeck and any threats they face there are neutralized by the end of the episode. While the series acknowledges the tensions around subjectivity and embodiment surrounding VR, it tries to resolve these tensions through a narrative closures that reassure the viewer that human subjectivity can remain centered and in a place of control without undergoing any kind of fundamental alteration. There is no merging of human and machine – indeed, the fears of this kind of merging are displaced onto the villainous Borg[38] – and the demarcations of body/information and biology/technology remain. In this way, *TNG* tends to reinforce a liberal humanism, which it defends against any

[36] Bukatman, 5.
[37] Ibid., 16.
[38] The Borg, one of the most powerful antagonists in TNG, are a race of neurologically linked cyborgs that assimilate other species into their collective.

kind of post-humanism, that understands humans as in full possession of themselves and in power over their technologies. Any threats posed to the physical body of holodeck users are always only temporary. Once the problems are resolved, the characters exit the holodeck with their body intact. If, as Bukatman argues, it is the "purpose of much recent science fiction to construct a new subject-position to interface with the global realms of data circulation, a subject that can occupy or intersect the cyberscapes of contemporary existence,"[39] it seems that *TNG* embarks on this construction of a new subject only to reveal this new subject as the same old subject of liberal humanism, capable of exerting its will over new cybernetic environments without undergoing any fundamental change to its subjective autonomy. The subject-position *TNG* constructs is an anachronism, and while this new/old subject may be adapted to the utopian future of the *ST* universe, it provides us little in the way of conceptualizing new subject-positions adequate to our present reality.

Moreover, *TNG*'s retreat into a liberal humanist model of subjectivity ensures the re-centering of a taken for granted white and hetero-masculine subjectivity. As for liberal humanism, the human subject at stake in *TNG* is an implicitly white, heterosexual, and male subject. That the characters who find themselves threatened by the holodeck and overcome these threats are predominately white, heterosexual males implicates *TNG* in a response to the anxiety over the integrity and control of the white hetero-masculine subject that promises the reconsolidation of this subject's hegemony. As I have argued, the focus on the adventures of male characters in the holodeck, and particularly on their romantic conquests, constructs VR as a space for the exercise of masculine dominance. Additionally, it naturalizes virtual space as a

[39] Ibid., 8.

space of heterosexual male desire, erasing any possibilities of VR becoming a space for the exploration of feminine and queer desires. There is also a subtle erasure of non-white subjectivity in *TNG*'s construction of VR via the holodeck. As a black man, LaForge's interaction with the virtual environments of the holodeck could potentially provide for an exploration of the racialized dimensions of VR technologies and environments. There is, however, no such exploration. *TNG* instead suggests LaForge's race as an irrelevancy, as his interactions with the holodeck appear not at all different to those of his white crewmates. While this seems to work within *ST*'s imagining of a utopian future in which racial equality has been achieved, in the context of the present moment in which neoliberal "colorblindness" and multiculturalism are predicated on the elision of material inequalities – an elision participated in by VR's claims to produce an environment in which race, gender, and class are irrelevant – it operates to ensure the persistence of the hegemony of whiteness in VR.

Journeying into VR5

Airing for only one season from 1995-96, *VR5* focuses on the adventures of Sydney Bloom, a telecommunications worker who discovers that her computer equipment allows her to use VR5, a fully immersive virtual reality technology that brings the user into a life-like sensory environment. VR5 represents the next evolutionary step from VR4 or cyberspace, which corresponds to the contemporary VR technologies of the time. Upon discovering VR5, Sydney turns to VR researcher Dr. Frank Morgan, who turns out to work for a mysterious and powerful international organization known as the Committee. Morgan enlists Sydney to complete various missions using VR5 in service of the Committee. Several episodes in, however,

Dr. Morgan is assassinated and is replaced by Oliver Sampson, who becomes Sydney's new liaison to the Committee. From the beginning, the series hints that Sydney's ability to enter VR5 is linked to the work of her father, Dr. Frank Bloom, whose research focused on the use of computers to expand the abilities of the human mind. In Sydney's memory, her father along with her sister Samantha were killed in a car accident when she was a child, an accident she survived. However, by the end of the series, we learn that these memories have been artificially implanted and that her father and sister were actually taken by the Committee to conduct top-secret research in new VR technologies, including moving beyond VR5 to develop VR6, VR7, and VR8.

In the pilot episode of the series, we see Sydney Bloom sitting at her computer, wearing a VR headset, and running a VR simulation of flying through a city skyscape. The graphics are rudimentary, on par with actually existing VR programs of the time. Sydney holds her arms up and sways side to side, simulating her virtual journey between the skyscrapers. Suddenly, however, when Sydney receives a phone call and places the phone on top of a piece of equipment connected to her computer, she is transported into a much more life-like virtual landscape which the viewer enters with her. In this transition, the show quickly moves from a representation of contemporary VR technologies to an exploration of the cultural fantasies surrounding these technologies. The segue between reality and virtual reality is visualized by the camera swirling at high speed through a kind of metallic plasma. The plasma is an interesting visual as it signifies the entry into VR as a merging of technology and biology, refusing an understanding of the journey into VR as simply disembodied consciousness taking the form of information. Much like the wormhole travel sequence of *SG-1* discussed in the

previous chapter, this sequence serves to visualize the hyper-speed journey to a new place. Whereas in *SG-1*, the new place is a new point within reality, in *VR5* it is the virtual space of information, given representational form as a virtual environment. The sequence, which repeats every time Sydney enters VR5, serves to construct the journey into VR as one of movement, thus foregrounding mobility.

Sydney's first journey into VR5 also serves to introduce the central *novum* – that is, the intrusive novelty that creates the imagined world of a SF text as different from our own world[40] – of the series. While in *TNG*, the holodeck is just one technology amid a host of other futuristic technologies, VR technology becomes the central element in the universe of *VR5*. While *TNG* is set far in a future featuring a multitude of new technologies, *VR5* takes place in the present and emerges from the familiar technologies of a home computer and telephone. One consequence of this distinction is that the existence of VR technology becomes the pivotal force in VR5. These distinctions suggest that the *novum* of *TNG* (and the *ST* universe more broadly) is social rather than technological while in *VR5* the *novum* is technological. The pivotal difference between the viewer's current reality and the future of *TNG* is the development of human society in a post-scarcity world. The capability of warp travel, the technological achievement that makes all of the events in the *ST* world possible is less an independent technological element than the inevitable outcome of technological process freed from the constraints of a world ruled by capitalism and nationalism. In *VR5*, on the other hand, the viewer is asked to consider how their current reality might change with the sudden introduction of a radically

[40] On the concept of the novum, see Darko Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven: Yale University Press, 1979) and Istvan Csicsery-Ronay Jr., *The Seven Beauties of Science Fiction* (Middletown, CT: Wesleyan University Press, 2008).

advanced VR technology. Thus, the series works to expose the contradictions inherent in the introduction of VR technologies within the viewer's contemporary world through making VR the *novum* in its diegetic world. In contrast to *TNG*, then, the centering of VR technology in *VR5* allows it to engage more exclusively with the cultural fantasies and anxieties surrounding VR.

Perhaps because of this more focused examination of VR technology, *VR5* devotes more effort to establishing the uniqueness of virtual environments in contrast to physical environments. In *TNG*, the scenes in the holodeck are almost entirely indistinguishable visually from scenes occurring outside of the holodeck. The lighting and colors of the holoprograms give them a life-like appearance; the holodeck gives illusion the quality of visual veracity. In *VR5*, on the other hand, there is a marked visual contrast between the real-world and VR scenes. VR5 is typically marked by a hallucinogenic quality, with vibrant and unnatural colors. This visual distinction is significant in relation to the increased emphasis that *VR5* puts on the psychological aspects of VR compared to *TNG*. The hallucinogenic character of the visuals in the VR scenes of *VR5* reflect the popular idea of VR as a technological form of LSD,[41] a technology that could open up new forms of perception to the human mind. This idea was in line with the thinking that VR empowered consciousness liberated from the body. VR becomes its most psychedelic in the series, however, when Sydney finally enters VR7 in the series finale. Syndey

[41] LSD, known colloquially as "acid," is a hallucinogenic drug that became popular among members of the 1960s youth counterculture as a means of expanding consciousness. Timothy Leary, who conducted research on LSD in the 60s and was a proponent of its therapeutic use, hailed VR as a new form of psychedelic drug like LSD. See Timothy Leary, *Chaos and Cyberculture* (Oakland: Ronin, 1994). Another veteran of the 60s counterculture, Grateful Dead front man Jerry Garcia, famously commented after seeing a presentation on VR, "They outlawed LSD. It'll be interesting to see what they do with this." Adi Robinson, "Virtual Reality Panic," *The Verge*, last updated June 20, 2014, https://www.theverge.com/2014/6/20/5827424/a-kind-of-electronic-lsd. Journalist Howard Rheingold noted that the most persistent question he was asked when attending VR presentations while researching his book on VR was if VR was the new LSD. Howard Rheingold, *Virtual Reality*: *The Revolutionary Technology of Computer-Generated Artificial Worlds – and How it Promises to Transform Society* (New York: Touchstone, 1991), 353.

enters VR7 along with her mother, who has been catatonic since a VR6 experience fried her brain on the night Samantha and Frank Morgan were taken by the Committee, in an attempt to bring her mother out of her catatonic state. Samantha warns Sydney before entering that "space and time don't work in the same way in VR7," and indeed when we enter the VR space with Sydney, we find a swirl of scenes and images that move at unnatural paces. Here, within VR7, it seems that human consciousness is at its most liberated from its physical constraints, escaping not just the confines of the body but of conventional space and time. However, while Sydney's mother emerges healed from the journey, Sydney herself has been rendered unconscious and physically unresponsive. Thus, the effects of the consciousness expanding VR7 are ultimately enacted on the body and put the physical safety of Sydney at risk, once again manifesting the deep anxieties about loss of control over the mobility of the physical body – anxieties that stem from a crisis in a liberal humanist understanding of subjectivity wedded to the self-controlled physical mobility of the subject – in a world in which mobility is increasingly produced in virtual form.

Interestingly, we discover in the final episode that, when a user relives memories in VR6, there is a connection between the life-likeness of the images and the veracity of the memory. Sydney, Samantha and Duncan (Sydney and Samantha's childhood friend) connect in VR6 to discover the truth about what happened the night Dr. Bloom and Samantha were taken away. While some of the memories appear in the more psychedelic color schemes that have marked the visual spaces of VR5 throughout the series, others begin to take on a more life-like visual appearance. Samantha explains to Sydney and Duncan that the more realistic the colors, the closer to the truth the memories are. Besides serving the narrative function of revealing the

real sequence of events that unfolded the night Dr. Bloom and Samantha disappeared, the association of visual quality with truth inside of the virtual environment traffics in an occularcentrism that in Western culture has associated vision with the mind in contrast to the other senses which are linked to the physical body and that moreover privileges vision and mind over the body and its senses. This occularcentrism underlies VR technology with its overwhelming reliance on vision to construct virtual experiences. As Hillis notes, even while other senses – particularly hearing – are often incorporated into VR, they are always rendered subservient to vision.[42] Occularcentrism is also deeply embedded in the liberal humanist model of subjectivity, with its privileging of mind and vision over body and other senses. The visual focus of VR thus works on one level to reassert the centrality of the seeing Enlightenment subject in a realm of digital information flows that are non-visual and must be made visual through simulation in cyberspace and virtual environments. At the same time, however, the fact that the visual environments of VR are simulated and thus not "real" troubles the association of visuality with truth. The "truth" of the memories the characters experience in VR6 is not provided via direct visual access but through a visual simulation of information flows. Thus, while VR5's association of visual clarity with truth within VEs works to reassert the liberal humanist subject's visual access to truth in a hypermobile world, it also inadvertently exposes the contradictions inherent in this formation.

While the visuals of *VR5* tend to reinforce the privileging of consciousness over body, the series' engagement with gender does not necessarily follow the masculinization of virtual space that such a privileging has tended to produce. Unlike *TNG*, in which male characters are

[42] Hillis, xxi.

at the center of adventures in VR, *VR5* centers the journeys of a female protagonist into the spaces of VR. Of course, Sydney's access to VR technologies is mediated through her family, as it was her father's research and equipment that allowed her to enter VR5, and thus the empowering potential of her journeys into VR is somewhat circumscribed by her place within a patriarchal family structure. Nevertheless, in following Sydney as she navigates VR5, the series subverts to an extent the masculinization of virtual space naturalized in much of the popular discourse around VR technology through its erasure of female bodies. Moreover, Sydney often faces the threat of male violence within the VR scenes she enters, highlighting the very different way in which the female user inhabits virtual space. In the pilot episode, Sydney takes her co-worker into VR and what starts as a date turns into a nightmare as the man, whom she discovers is actually a serial killer, tries to murder Sydney. Sydney is put in danger of a slightly different form of male violence in "Dr. Strangechild" when the Committee tasks her with finding a genius teenage boy who works for a top-secret weapons lab. The boy is engaged in a game of cat and mouse with his employers, leaving cryptic clues and calling the lab to taunt them. The Committee decides to take advantage of these phone calls by having Sydney take the boy into VR5 when he calls. When Sydney first enters VR5 with the boy, she finds herself perched dangerously in a tree standing over a deep chasm. She is accosted by wild birds and a snake before the boy's disembodied voice addresses her. Finally Sydney is knocked off of her branch by a gust of wind but luckily manages to grab another branch and exit the VR environment. Here, even though Sydney has designated the virtual environment, she finds herself in a space controlled entirely by the male character – who appears only as disembodied consciousness – where her physical safety is imperiled. If VR holds out the fantasy of the

hetero-masculine humanist subject achieving the unrestricted mobility of disembodied consciousness, *VR5*'s imagining of threats to the female body within VR register the persistence of an embodied materiality that threatens this fantasy central to the reconfigured hegemony of the liberal humanist subject in hypermobility.

Sydney's position in relationship to the Committee also works to illuminate the gendered dynamics of VR technology. All of the representatives of the Committee we see in the series are male and Sydney is often tasked by the Committee with using VR5 to connect psychologically/emotionally with male characters who the Committee needs to locate or extract information from. In the aforementioned "Dr. Strangechild" for example Sydney must connect with a young genius who has escaped from the top-secret lab at which he works and convince him to return. Similarly, in "Simon's Choice" the Committee tasks Sydney with using VR5 to find out why a US intelligence agent gave up the names of other operatives to an enemy. These missions often prove emotionally taxing for Sydney yet only provide any reward for the Committee. Here, VR works as a mechanism to extract female affective digital labor for the benefit of a male-dominated organization.

While in its engagement with the gendering of VR, *VR5* troubles a resolution of the anxieties of liberal humanist subjectivity in the face of a crisis effected by the technologies of hypermobility, there is one way in which it actively participates in this resolution, and that is in its racialization of VR technology. *VR5* is almost entirely devoid of non-white characters, and we never see a person of color traversing the virtual spaces of VR5. While foregrounding the journeys of a female character in VR works to complicate the assumed masculinity of the subject engaged with VR technology, the subject of VR is nevertheless still assumed as

definitively white. Thus, even if the threats to the integrity of the liberal humanist subject are not assuaged in the same way they are in *TNG*, threats to the hegemony of whiteness provoked by hypermobility and VR are elided through the lack of an engagement with non-white subjects' experience with VR.

As in *TNG*, there is also a link in *VR5* between technologies of virtual and physical mobility. However, these connections are rendered more oblique than they are in *TNG*. Primarily, they are established through symbols of physical mobility that permeate the series' narrative universe. In the pilot episode, Sydney has a flashback to the night that her father and sister (to her knowledge) died while she was at home with her mother. The tragic scene is, significantly, a car wreck. As Sydney's father loses control of the car, it flips into a lake, and only Sydney is able to escape while her father and sister drown. Sydney's journeys into VR seem to restore some of the mobility in virtual form that was taken away by the accident. In two different episodes, plane crashes serve as central narrative events around which Sydney's journeys into VR5 take on significance. In the first, "Facing the Fire", Sydney is tasked by the Committee with helping an Air Force pilot who has recurring delusions that his plane is on fire. In a VR encounter with the pilot's father, Syndey learns that the son was involved in the test of a top-secret military plane that went awry when the plane crashed, killing the other pilot, and has been brainwashed to repress the memory by his father. In the other episode, "Control Freak", an ex-air traffic control hijacks an air control tower as an act of revenge for an accident he was wrongly blamed for. As it turns out, the committee had actually planted a bomb on the plane to kill Oliver Sampson. Here, technologies of physical mobility, in contrast to VR, are immediately linked with danger to the physical body. In a sense, then, we can see here

reproduced the popular fantasy of virtual mobility as a safe alternative to dangerous movement through a messy and uncontrollable physical world. In contrast to the perilous mobility of automobiles and airplanes, mobility in VR seems to offer more physical safety. However, this safety is increasingly unsure as the series progresses, and Sydney herself ultimately falls victim to the physical dangers of VR in the final episode of the series.

As in *TNG*, however, virtual and physical mobility are not imagined as separate but as interlinked through VR technology. Perhaps the most interesting merging of VR technologies and the physical body in *VR5* comes in the form of VR8, an advanced VR technology briefly introduced in the episode "The Many Faces of Alex". With VR8, humans can be remotely programmed via wireless networks with different personalities. Here, the ability of VR to link consciousness via computer networks is extended into physical space and made to act on the physical body. VR8 is introduced within a pair of scenes that particularly puts on display the contradictions and tensions surrounding the place of the body and physical mobility within the production of virtual mobility. In the episode, the narrative leads the characters in the final scene to a train station that was the site many years ago of an incident that linked a pre-committee Oliver, Alex, and Dr. Bloom together. Before occurring in reality, however, the scene plays itself out when Sydney is in VR5. In the VR scene, she and Oliver find Alex at the train station and, while Dr. Bloom and Sydney lurk in the background, Alex is fatally shot by an unknown assailant. Following the VR scene, Sydney and Oliver head to the train station where they find Alex, who collapses from, we are led to assume, the strain on her mind from years of VR8 manipulation by the Committee. Just as in the VR scene, Dr. Bloom and Samantha stand in the distance, outside the view of Oliver and Sydney. The setting of the scene in a train station

seems to be of crucial importance here, as it calls back to an earlier moment in the production of mobility where the speed of mobility hinged on the movement of physical bodies and material resources. Moreover, this also points to a moment in which the liberal humanist subject was perceived as asserting its potency through the expansion in physical mobility enabled by new mechanical technologies of mobility. The initial playing out of this scene in VR, however, puts us immediately in the realm of hypermobility and the determinations of light-speed information transfer over physical movement. Finally, we have Alex's physical collapse from the effects of VR8, a futuristic VR technology that takes VR from the realm of information and once again centers the physical body. Thus, there is a kind of temporal layering of modes of mobility production seen here, with a past represented by the physical mobility of locomotion, a present of disembodied virtual mobility, and a future in which virtual and physical mobility merge into an embodied virtual reality. Rather than a utopian fantasy of disembodied consciousness merging with information in the virtual space of digital networks, what we find here is a deep set anxiety about the physical body and its place within the present and future production of mobility. Unlike the dismissal of the significance of the body found in the prognostications of Lanier or even in the cyberpunk fiction of the previous decade, *VR5*'s vision of the future does not celebrate a liberation of mind from body but highlights fears of the threats posed to the body by a cyborg merging of embodied consciousness and virtual information flows. The series reveals a fault line in a dominant ideology that treats embodiment and materiality as secondary to consciousness and information, but perhaps more significantly it manifests an anxiety over a post-human future in which "there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic

mechanism and biological organism, robot teleology and human goals."[43] It is again significant here that we are focused on the journeys of a female protagonist as it is female bodies that are often placed under erasure within the post-human celebration of the cyborgian merger of body and information.

Mind, Body, and Mobility in Innerspace

As I have noted, one of the most popular claims about the potential of VR technology was that it would render the physical body obsolete, creating an environment where the user could leave their body behind and interact with the virtual world of information as pure consciousness, able to take on multiple identities or electronic "bodies" as they suited their needs. In a 1989 paper, computer scientists Randy Walser and Eric Gullischen wrote:

> More than any mechanism yet invented, [cyberspace] will change what humans perceive themselves to be, at a very fundamental and personal level. In cyberspace, there is no need to move about in a body like the one you possess in physical reality. You may feel more comfortable, at first, with a body like your "own" but as you conduct more of your life and affairs in cyberspace your conditioned notion of a unique and immutable body will give way to a far more liberated notion of "body" as something quite disposable and, generally, limiting. You will find that some bodies work best in some situations while others work best in others. The ability to radically and compellingly change one's body-image is bound to have a deep psychological effect, calling into question what you consider yourself to be.[44]

For Walser and Gullischen, then, the static human body is something to be surpassed and overcome. VR (or cyberspace in their terminology) promises the liberation of human consciousness from its limiting embodiment and the ability to fluidly take on new identities and

[43] Hayles, 3.
[44] Qtd. in Rheingold, 191.

to inhabit new bodies, a fantasy that extended even to ideas about the mundane world of corporate boardrooms. In a 1992 article in *Infoworld*, a business-focused publication centering on information technology, Bob Metcalfe speculates on what the flexibility of self-presentation in VR could mean for business meetings: "I might want to attend certain meetings looking my athletic, youthful self; go to others as an elderly Asian woman; and maybe now and then as a golden retriever…VR teleconferencing would save jet fuel and possibly circumvent racism and sexism in business."[45] In addition to once again reinforcing the idea that the repression of the physical body would somehow overcome racism and sexism, this quote, in linking the flexible identity shaping enabled by VR to the operations of business, unintentionally points to the way in which the flexibility of disembodied identity in VR is entirely shaped by the logic of informational capitalism. VR renders the desire for freedom in the construction of individual identity in commodity form. Moreover, as Hillis argues, this commodification of identity in virtual space is predicated on a forgetting of material relations.[46]

Given this emphasis of VR enthusiasts on VR's supersession of the physical body, it is interesting that in neither *TNG* nor *VR5* do characters fully leave their own physical bodies behind. In *TNG*, users enter the VEs of the holodeck with their own bodies, and in *VR5*, characters' avatars in the space of VR5 correspond exactly to their real physical bodies. This suggests that the desire to leave behind the body assumed by the designers of VR was not as fully embraced within the popular imagination about these technologies. People instead seemed quite stubbornly committed to the idea of keeping their own bodies and SFTV texts like

[45] Bob Metcalf, "Virtual Reality Could Revolutionize Business or be 90s LSD," *Infoworld*, October 5, 1992, 51.
[46] Hilis, xxxii.

VR5 and *TNG* help to illuminate the deep anxieties over the threat of losing these bodies in a society increasingly ruled by immaterial flows of information. In a sense, then, we can read this refusal of disembodiment as an indication of resistance to the virtual commoditization of identity.

The exploration of VR technologies in SFTV and their dramatization of the anxieties surrounding these technologies serve as ways to register and negotiate, in the words of Bukatman, the "crisis of a body that remains central to the operations of advanced capitalism as sign, while it has become entirely superfluous as object."[47] The terms of this crisis and the shift in modes of power it has entailed is perhaps best explained by Abernathy, a member of the Committee who has betrayed his mentee Oliver, in the final episode of VR5. "Power," he tells Oliver, "isn't any more about accumulating territories or weapons; it's about accumulating minds." Abernathy's assertions here speaks to a transition in governmentality from one based on the control of bodies to a cybernetic governmentality centered on the control of accumulated minds. I think it's important to note, however, that while the crisis of the body in the transition to cybernetic governmentality certainly marks the emergence of a new mode of power, one concomitant with the emergence of hypermobility, the body does not exist for advanced capitalism merely as a sign. The real labor extracted from physical bodies in factories and on corporate farms, the destruction of bodies by the forces of poverty and war, and the mass displacement of bodies by these same forces all remind us of the stubborn persistence of the physical body and its continued importance for the regimes of late global capitalism.

[47] Bukatman, 16.

Like in the holodeck of *TNG*, *VR5* is an experience of full sensory immersion in a virtual environment. That is, unlike actual VR technology of the time, mobility in VR is not here simply a disembodied visual experience but one that encompasses the entire body. This much is clear in Sydney's first journey into VR5, which is contrasted with her use of contemporary VR technology earlier in the episode. However, the body is somewhat less central in the virtual environments of *VR5* than it is in those of *TNG*. While in the holodeck, the user enters the environment with their own physical body, VR5 involves the use of a HMD which brings the user into VR as an avatar, albeit one with all the senses of the user's actual body, while their physical body remains stationary in front of the computer.

While there is less focus in *VR5* on the danger to the physical body presented by virtual reality, these threats nevertheless are a persistent narrative feature. When Sydney first meets Dr. Frank Morgan, a VR researcher who works for the Committee, she asks him what happens to a person's body if they are killed in VR. He tells her the story of a man who wanted to find out what it felt like to hit the ground after freediving out of a plane and did so in VR. The man, he tells her, has been in a coma ever since. Later, in the episode "Love and Death" Sydney returns home one night to find a dead stranger hooked up to her VR equipment. A distraught Dr. Morgan reveals to Sydney that this is the sixth person who's died in VR5. Neither Sydney nor the viewer are given any clue as to how or why this strange man was using Sydney's equipment to enter VR5 or what caused his death. In this way, the danger posed by VR is rendered as mysterious and unknowable. This is a stark contrast to the dangers posed by the holodeck in *TNG*, where in every instance there is a physical threat to the users, the narrative inevitably reveals to the viewer and the characters the rational cause of this threat. Whether

it's alien intervention, an emerging technological consciousness, or human error, the mystery of why the supposedly safe holodeck put people in danger is solved. The threats posed by VR5, on the other hand, are ultimately threatening in their mysteriousness, their resistance to rational explanation, at least any not beyond the limited and situated knowledge of Sydney, who serves as our guide into the world of VR.

Nevertheless, the physical body and physical mobility play less of a role in *VR5* than they do in *TNG*. *VR5* concerns itself much more with the psychological journeys of its characters. We might understand this shift to conceptualizing VR in psychological terms as a movement away from thinking about VR in terms of mobility. However, I would suggest that mobility remains central but that it is understood in terms of an internalized mobility, mobility in "innerspace" as opposed to outer space.

While both *VR5* and *TNG* use VR technologies as a way to dramatize and allow characters to work through internal psychological processes and struggles, in *VR5* in particular, Sydney's journey's through VR are about working through her psychological trauma and uncovering repressed memories of her past that reveal the truth about the Committee and her father's work. The use of virtual mobility as a form of exploring the inner psychic space of characters represents a transition from mobility in SF from mobility through external space to mobility through the internal space of the mind. Robert L. Strain, Jr. notes a tendency in contemporary SF to move away from narratives focused on expansion through space to a focus on the personal psychological journeys of the characters. He calls this a move from a focus on

outer space to one on "innerspace."[48] Strain is speaking here of mid-2000's space operas and specifically *Battlestar Galactica*. However, the prevalence of VR and its use as a mode of traversing the innerspace of the mind shows that already in the 90s there was a movement towards a focus on innerspace and innerspatial mobility. In a world in which hypermobility has seemingly exhausted all spatial frontiers, where there is no uncharted space to explore and instead we face a kind of claustrophobic consciousness of an increasingly shrinking world, fantasies of mobility move from outer space to innerspace. In *VR5*, we find this kind of innerspatial journey as Sydney uses VR to move through the sinuous pathways of her memories as well as the unconscious minds of those she takes into VR just as one might traverse the spaces between planets.

The journey into the innerspace of the mind is mirrored also, however, by a journey into the innerspace of the computer and the digital networks of the Internet. Again here shifts in the SF genre respond to transitions in dominant mobility technologies. As Bukatman suggests in charting the development of SF from the space age to the cybernetic age, the outer space of science fiction becomes replaced with the inner space of the computer.[49] *VR5* seems cognizant of this mirroring and draws connections between the computerized networks traversed by the technologies of VR and the neural networks of its human users. After all, Dr. Bloom's research interests, which ultimately propel all the crucial events in *VR5*, are not in computer technologies per se but rather in the human mind and the expansion of its abilities.

[48] Robert L. Strain, Jr., "Galactica's Gaze: Naturalistic Science Fiction and the 21st Century Frontier Myth," in *Siths, Slayers, Stargates + Cyborgs: Modern Mythology in the New Millenium*, eds. David Whitt and John Perlich (New York: Peter Lang, 2008): 51-72.
[49] Bukatman, 5.

Losing Control

In a world in which globalized flows of information reshaped human experience of space and time, there was a deep anxiety over a loss of control that had been ceded to cybernetic technology and the machinations of global capital. As Bukatman argues, "there has arisen a cultural crisis of visibility and control over a new technologically defined reality [in which] [i]t has become increasingly difficult to separate the human from the technological."[50] This crisis meant not just a blurring of boundaries between the human and technological but threatened the very dissolution of the human subject, at least in its liberal humanist form. Indeed, the threat of a loss of control was a significant part of the crisis in liberal humanist subjectivity I have been returning to throughout the chapter, as the subject of liberal humanism was in part defined by their control over both their consciousness and physical mobility. For Bukatman, this loss of control and subjectivity found a response in the narratives about cyberspace that emerged in 80s cyberpunk fiction. "Within the intersecting planes of cyberspace," he argues, "the body is replaced and the subject's autonomy is resurrected."[51] Like its ideological and ontological predecessor, VR brought with it the promise to navigate a way out of the crisis of subjectivity and control through bringing an increasingly unrecognizable reality of cybernetic information flows within human control, allowing human users to enter and manipulate the space of information. As Hillis argues, VR presents an attempt to produce a completely controlled environment in contrast to the resistant natural environments of the real world.[52] However, what is particularly notable about the experiences of characters with VR technologies

[50] Ibid., 2.
[51] Ibid., 16.
[52] Hillis, 203.

in both *VR5* and *TNG* is how easily these environments evade the control of these characters. These series might suggest, then, that the fantasies of control around VR were not so entrenched as Hillis would suggest and that there was in fact a deep anxiety about VR technologies escaping human control and thus failing to provide for the reconstitution of centered human subjectivity in the cybernetic world.

In linking VR to the subconscious, both series frustrate fantasies of conscious control that dominated utopian imagination of VR at the time. However, while both *TNG* and *VR5* dwell on the breakdown of control over virtual environments and thus the tension between VR's promise of control and the actuality of the complex interaction between human subjects and virtual technology, they differ in the degree to which this tension is resolved. In *TNG*, human control over virtual environments is almost always restored. The narratives of holodeck-centric episodes tend to follow the same basic pattern of control lost and restored. The episode "Fistful of Datas" from season 6 provides a typical example. In the episode, Worf and his son enter into a holodeck simulation of a generic Western story. Meanwhile, LaForge is working on integrating Data's positronic brain more fully with the *Enterprise*'s system. A glitch causes Data's memory files to mix with the recreational files on the 19th century West being utilized by the holoprogram. As a result of the glitch, the safety controls on the holodeck are disabled and the villain in the holoprogram takes the form of Data, who kidnaps Worf's son. Worf and Troi determine that the only way to make it out of the program is to play it out to its conclusion. They do so successfully while LaForge discovers the problem and disconnects Data from the system. Here, as in most of the holodeck-centric episodes, the physical danger posed by the holodeck is not an inherent feature but the product of an anomaly and the characters are able

to use their ingenuity to discover a technical solution that restores their control over the virtual environment.

In *VR5*, by contrast, the loss of control experienced by the characters is more of a persistent feature and one that resists any easy narrative resolution. Sydney discovers that while she is able to determine the setting of her VR adventures and control them up to a point, they quickly slide away from her conscious control. Reasserting control becomes the impetus for one of Sydney's first VR experiences. Sydney's neighbor Mr. Kravitz constantly parks his expensive sports car behind Sydney's and refuses to move it so she can get out. Sydney takes him into VR5 and, in the virtual environment, drives a forklift into his car and moves it out of the way. Here, the virtual environment clearly affords Sydney a measure of control that she does not have in the physical world. However, Sydney's control over the environments she creates in VR5 frequently fades away rather quickly. In the episode "Sisters," for example, Sydney scripts a scene between her and the character she's taking into VR5. While the conversation initially follows the script, it quickly veers off as her interlocutor does not answer the way Sydney had scripted. As the series continues, Sydney's control over the virtual environments she enters becomes increasingly tenuous. Both her own unconscious and those of the people she enters VR with make the events in the virtual environments unpredictable. This lack of control in the virtual world is mirrored in the real world, as Sydney becomes a pawn in power struggles between competing factions within the Committee. Ultimately, while on the run from Committee operatives trying to have her killed, Sydney ends the final episode unconscious after her experience in VR7. Here, rather than her control and mobility being

restored by the narrative, she ends up in a state of utter lack of control over both her virtual and physical environment.

These questions of control are deeply interwoven with race, gender, and sexuality and the anxieties I have noted in liberal subjectivity. Virtual space is inherently designed as a white, hetero-masculine space at the same time as it claims to be a space in which racial, class, and gendered divisions are neutralized. Thus, it is not simply a question of access to these technologies, but of the very ways in which they were designed to fulfill the needs of white hetero-patriarchal interests, largely precluding more radical imaginings and uses of these spaces. The spatially bounded worlds and mathematical logic of VEs that were central to their design worked to create virtual space as one wherein desires for rational control over a messy social world could be realized. And as I have suggested, VR attempted to reproduce the embodied control and mobility that the white hetero-masculine subject found threatened both by challenges to its hegemony by oppressed subjects and a world increasingly governed by cybernetic flows of information. The preoccupation with control and mastery over space and movement that marks engagements with VR in the popular imagination are thus not accidental but integral to virtual spaces designed to ensure the continued mastery of the white hetero-masculine subject. Despite moments in which VR offers a space of freedom for Sydney in *VR5*, the continual frustration of her attempts at control over this space reminds us that such efforts aimed at restoration of control and mobility are tethered to the hegemonic interests of Eurocentric hetero-patriarchal capitalism and the white hetero-masculine liberal subject. Similarly, the success of the liberal subject in reasserting its control and autonomy within the virtual spaces of the holodeck in *TNG* serve to close off any hopes for realization of this space as

one aimed at ends not limited to subjective control and mastery, ends that might offer more meaningful experiences for those occupying subject positions outside of the white hetero-masculine model for whose gratification VR appears to have been designed.

VR and Utopia/Dystopia

The varying degree to which human subjectivity and control over mobility is restored within the narrative universes of the two series leads us to consider the different social worlds within which VR technology has emerged, the forces behind its development, and the social uses to which it is directed in each series. The discourse around VR technology has tended to go in one of two directions. On one hand, as I have outlined above, it is celebrated for its utopian potential to create a virtual world inhabited only by human consciousness shorn of its oppressive physical appendages. VR is a space where the human mind can roam free and all the problems plaguing the real world – economic inequality, racism, sexism, etc. – suddenly become irrelevant. The underlying assumption in this utopian imagining of VR is that if humans can leave their bodies behind, they can inhabit a virtual world as equals. On the other hand, VR is understood purely in instrumental terms, as a technological means to an end, whether for precipitating new developments in medicine, allowing architects to build virtual models of buildings, or training soldiers using virtual environments.

In the world of *TNG*, VR technology can exist simultaneously for both instrumental and recreational uses. As Picard sums up the holodeck in "The Big Goodbye," it's "highly useful in crew training, highly enjoyable when used for games or recreation." There does not appear, then, to be any significant tensions between these two purposes of the technology in the *ST*

universe. In the real history of VR technology in and before the 90s, however, its development into a technology that could be utilized for instrumental purposes determined the direction of its development. While the prospects of VR gaming helped to spark interest in the public imagination, VR technologies were developed primarily for military, medical, and other practical applications.[53] This meant that, as Hillis notes, there was a "culture of technique" surrounding VR technology in which technical rationality replaced concepts of ethics or politics.[54]

While in the utopian future of *TNG*, tensions between the instrumental and ludic or utopian rationalities of VR appear to have been resolved, these tensions are rendered very much palpable in *VR5*. Sydney's early experiments with VR technology and her first journeys into VR5 are motivated by a desire for enjoyment and a freedom of mobility not afforded by the physical world. However, when the Committee discovers what Sydney has done, they are quick to instrumentalize the technology, making Sydney conduct missions to accomplish Committee goals. Nevertheless, Sydney continues to find within these missions spaces for the exploration of herself and a liberating extension of her digital mobility. As Syndey tells Oliver, "I feel free when I'm in there." Thus, the tension between the instrumental and utopian valences of VR does not necessarily lead to a closing off of the utopian but rather the opening of utopian spaces of potential freedom within an instrumental regime.

Like other technological means of mobility, VR has been imagined in popular discourse in both utopian and dystopian terms. *TNG* and *VR5* engage in notably different ways with these

[53] Rheingold, in *Virtual Reality*, provides an extensive history of these practical utilizations of VR technology.
[54] Hillis, 202.

two poles of the discourse around VR technology. The universe of *TNG* in which the technology of the holodeck exists is a utopian one, and this utopianism extends to the equality of access to VR technology. All members of the Enterprise's crew, without regard to rank, are freely able to use the holodeck and create their own holodeck programs at no cost. The holodeck thus becomes a commonly held good, effectively socializing the apparatus of virtual mobility. While there is no evidence that this equality of access exists outside of Starfleet – and in fact the *TNG* spinoff *Deep Space Nine* suggests that holodecks are commercialized outside of Starfleet property – within the social space of the *Enterprise*, the democratic and egalitarian access to VR technology presents a stark contrast to a real world where VR technologies, at least remotely sophisticated ones, were available only to those with the financial means to obtain them. *TNG* thus provides us with a glimpse of what VR technology and virtual mobility could be when developed and consumed outside the constraints of capitalist exchange.

If the physical world of the *ST* universe in which the holodeck emerged are understood as utopian, the virtual environments within the holodeck might instead be conceived as virtual heterotopias. Within the holodeck, all times and places can exist simultaneously within the same space. Past and present, reality and fiction merge and interact, producing a heterotopian space outside the spatial and temporal confines of the external world. In the episode, "Descent," for example, Data plays a game of poker with Isaac Newton, Albert Einstein, and Stephen Hawking, and in "Emergence" the *Orient Express* rumbles through the landscape of Shakespeare's *The Tempest*.

In contrast to the utopian imagining of VR technology in *TNG*, *VR5* provides a much darker view of VR and its social context. While the world of *VR5* is not necessarily dystopian, as

Sydney travels further down the rabbit hole of VR technology, we are given an increasingly dystopian picture of the networks of power from which this technology emerges. In *VR5*, the development and use of VR technology is tightly controlled by the Committee, an enormously powerful secret organization that has been manipulating the experiments of the Bloom family with VR since Sydney was a child. The unknowability of the technological threats posed by VR has its political counterpart in the mysterious dangers surrounding the Committee. The Committee seems able to exert an unquestioned control over government and private entities. In "Dr. Strangechild", while the director of the lab clearly resents the Committee's involvement in the investigation, he is powerless to do anything about it. Similarly, in "Control Freak" Oliver is able to come in and take point in the hostage situation without being questioned by the local and federal law enforcement organizations involved.

The Committee serves as a way for *VR5* to dramatize the lack of control felt by individuals living under late global capitalism and put this lack of control into some kind of political context. The idea of a secretive and unknowable force guiding the development of society and, in particular, the development of technologies of virtual mobility, may seem on one hand to resonate with conspiracy theories that reduce the complexities of political, social, and economic power structures to the actions of powerful and unaccountable groups of elite individuals. However, it also importantly reflects a recognition of a world in which power eludes the grasp of individuals, working behind their backs without personal motivations. From what we see of the Committee, it is not a unified group but one marked by divisions and different interests. That it nevertheless seems to exert such an influence on the world speaks more to the impersonal forces of global capitalism than to the unquestioned power of a secret

organization. *VR5* also points to the way in which these forces operate in relation to the hegemony of the US state. While the Committee's relationship with the US government is never made explicit, it is clear at least that their interests are aligned and they cooperate in protecting these interests. We see this in "Simon's Choice" as the Committee works to uncover the motivations of a spy who gave up the names of US intelligence assets and in "Facing the Fire" when they take an interest in returning to duty a pilot who was involved in a top-secret program and experiencing PTSD. Moreover, as we have seen, the Committee is likewise invested in the maintenance of patriarchal power. What is conspicuously absent in *VR5*'s imagining of the Committee, however, is any concrete economic interests involved with the organization. While the Committee may speak indirectly to the forces of global capital, the Committee's involvement in the development of VR technology is never explicitly connected to the capitalist interests that have shaped its development in the real world.

Conclusion

More than any other digital technology that emerged in the 90s, VR brought to the fore the complex relationships between physical and virtual mobility indicated in the production of hypermobility. With VR, the tensions are heightened between the movements of physical bodies constrained by the material conditions of their existence and the light-speed circulation of information around the globe via fiber-optic computer networks. As I have argued in this chapter, while much of the popular discourse around VR tended to elide these tensions in favor of celebrating the disembodied mobility allowed by this new technology, the SFTV of the period afforded a more critical perspective that highlighted the tensions and contradictions inherent in

VR and its role in the production of hypermobility. Both *TNG* and *VR5*, to varying degrees, illuminate the cultural anxieties about the place of the physical body and physical mobility engendered by the development and growing fascination with VR technology in the 90s. While *TNG* provides a more thorough engagement than *VR5*, which is more preoccupied with VR's relationship to the mind, with questions of embodiment in virtual environments and the inter-imbrication of virtual and physical mobility, it also tends towards narrative resolutions of the tensions inherent in virtual mobility that are rooted in a liberal humanist faith in an enduring human subject that can ultimately master its technological tools without being fundamentally altered by them. By contrast, *VR5* generally refuses such resolutions, opening to a more provocative consideration of how human subjectivity and society might be radically changed by its encounter with technologies of virtual mobility.

Chapter 3

Star Trek Family Values: the Hypermobile Family and Reproductive Techno-Futurism in *Star Trek: The Next Generation* and *Star Trek: Deep Space Nine*

The premiere of *Star Trek: The Next Generation* (*TNG*) in 1987 marked the first live action *Star Trek* television series in almost 20 years, since the original *Star Trek* series (*TOS*) went off the air in 1969. The world had changed quite a bit in the intervening two decades, and the new series emerged from a historical context quite different than the one that had produced *TOS*. *TNG* premiered during the rapid thawing of US-Soviet relations and just two years before the fall of the Berlin wall. The majority of its run thus took place in a post-Cold War era of global capitalist expansion and a national climate of uncertainty about the role of the United States in a new global order. Media technologies had also changed considerably over this period. Whereas during *TOS*'s run in the late 60s, the analog television set served as the center of family media consumption, the networked home computer was beginning to usurp this role by the early 90s. While *TOS* aired in an era dominated by network television, *TNG* emerged during a time in which the Internet and technologies of television-internet convergence were increasingly shaping patterns of media development and consumption.

Perhaps not surprisingly given these historical and technological shifts, while paying homage to *TOS*, the narrative focus of *TNG* differed in important ways from that of *TOS*. While the title "The Next Generation" denotes a continuation of the *ST* universe into the future, it also bespeaks a new central element in this universe: the family. The family unit, seldom a narrative

concern of *TOS*, became a central focus of the narrative development and world building of *TNG*.[1] This privileging of the family is continued, and in many ways intensified, by the TNG spin-off *Star Trek: Deep Space Nine* (*DS9*), which ran from 1993-96. In this chapter, I argue that this shift in the *ST* franchise towards a centering of biological and metaphorical families can be understood as a response to the emergence of new media technologies of hypermobility and the hegemonic nexus of neoconservative and neoliberal ideologies in the US within which these technologies were understood. Reading *TNG* and DS9 in this way highlights the constitutive tensions and contradictions within a dominant ideology that embraced the free flow of capital aided by new media technologies while simultaneously resisting the deterritorializing force of these technologies through promoting a national morality based around hetero-patriarchal "family values."

In my reading of *TNG* and DS9, I make use of the interrelated concepts of the "hypermobile family" and "reproductive techno-futurism" to probe how the series engaged with anxieties about the destabilization of the hetero-patriarchal family provoked by the increasing penetration of hypermobility technologies into the domestic space. If the hybrid formations of internet and television emerging during the 90s opened up the home to threats of social contagion, threats that were discursively contained through an emphasis on "family values," looking at the way in which *TNG* and DS9 employed the tropes of the "hypermobile family" and "reproductive techno-futurism" provides one glimpse into how these discursive

[1] Interestingly, this transition has gone unexplored in work on *TNG* in SF studies. For example, while Clyde Wilcox has insightfully explored the social changes between the two series, including those in gender roles, he does not identify the presence and centrality of families as one of these changes. Clyde Wilcox, "To Boldly Return Where Others Have Gone Before: Cultural Change and the Old and New *Star Treks*," *Extrapolation* 33, no. 1 (1992): 88-101.

struggles played out. As Judith Stacey notes, the "postmodern family" is marked not by a consistent set of ideals but a fundamental ambivalence,[2] and this ambivalence is made manifest in the contrasting employments of the mobile family in *TNG* and *DS9*. If in *TNG*, alternative forms of kinship become possibilities for the hypermobile family, *DS9* tends to close off these openings in favor of a reconsolidated traditional and normative family, yet one not entirely congruent with the hypermobile family of neoconservatism. These contrasting visions bear the marks of a social and political transition occurring in the early 90s where the destabilization of the traditional family effected in part by new hypermobility technologies and the resulting challenges to the hegemony of the heteronormative family produced a backlash in the form of a call for a return to traditional family values by the emergent neoconservative movement in the US. In this chapter, I explore the ways in which *TNG* both bolsters and subverts these hegemonic constructions and thus illuminates the complex and contradictory elements of US capitalist ideology in the 90s as it came to terms with the emergence of new technologies of hypermobility. I then turn to the mode by which the hypermobile family was constructed in *DS9* and the ways in which this construction followed and departed from that of *TNG*.

The contrast between the two series lies primarily in the different aspects of the articulation between hypermobility and constructions of the normative family with which they engage. For its part, *TNG* explores shifting constructions of the family in response to the increasingly precarious conditions of late capitalism and the ways in which the family unit becomes the privileged subject of hypermobility. *DS9*, on the other hand, engages with the

[2] Judith Stacey, *In the Name of the Family: Rethinking Family Values in the Postmodern Age* (Boston: Beacon Press, 1986), 7-11.

tensions around the construction of the family within the emerging ideology of neoconservatism and its often contradictory articulation to the ideology of neoliberalism that underpinned global capitalist expansion.

To grasp the articulation of the family and hypermobility in both *TNG* and *DS9*, it's important to consider how exactly hypermobility was imagined in the *ST* universe of the two series. In what ways can the technologically-enabled mobility of these worlds be understood as representing the hypermobility produced by the Internet? The discursive production of hypermobility involved two different understandings of hypermobility, one viewing it as the enabling of high-speed travel across space between two points, the other conceptualizing it as the annihilation of spatial distance creating a simultaneity between two points. Both of these understandings exist to an extent in both *TNG* and *DS9*. However, the former is clearly dominant in *TNG* while the latter is dominant in *DS9*. The starship *Enterprise* in *TNG* is constantly in motion, travelling from one destination to another. However, its warp-speed capabilities mean that journeys between destinations hundreds of light years away can be accomplished in just days or even hours. In effect, the hypermobility enabled by the *Enterprise* produces a shrinking universe, much in the same way that the Internet's light-speed capabilities of information transfer were beginning to produce the sense of a shrinking world. Indeed, the Enterprise's voyages might be seen as a physical embodiment of the "information superhighway", and like Vice President Al Gore's vision for the Internet, they were focused on the pursuit and spread of knowledge and the formation of an expanded democratic polity. However, on the superhighway of hyper-space in *TNG*, it is not just information but people that are able to travel at faster than light speeds. *TNG* thus extends the utopian vision of the

information superhighway to include the physical mobility of embodied human subjects. More than an extrapolation of technological development, this extension is perhaps best understood as being shaped by the novel social conditions imagined in *TNG*. Unlike visions of an information superhighway focused on capitalist exchange, the universe of *TNG* is a post-capitalist one. As Jean Luc Picard, the captain of the Federation starship *Enterprise*, explains in the season 1 episode "The Neutral Zone" to a 20th century financier recently awoken from cryogenic stasis, "people are no longer obsessed with the accumulation of things. We have eliminated hunger, want, the need for possessions." In this way, *TNG* realizes the utopian promise of the Internet in a form that exceeds its limits as a tool of capitalist expansion. However, as I will suggest, this subversive impulse is mitigated somewhat by *TNG*'s privileging of the family as the proper subject of hypermobility. *DS9*, on the other hand, presents a much less utopian vision of hypermobility. The discovery of a stable wormhole bridging the Alpha quadrant and the yet-unexplored Gamma quadrant of the galaxy initially presents opportunities for furthering Starfleet's mission of peaceful exploration, but these opportunities are quickly replaced by threats as the wormhole brings the Federation into conflict with a powerful enemy. Thus, while *TNG* tends towards a celebration of the utopian potentials of hypermobility, *DS9* renders palpable the cultural anxieties about the potential threats of a hypermobile world. However, just as the family is central to *TNG*'s utopian vision of hypermobility, the family in *DS9* presents the only source of hope for realizing the more utopian potential of hypermobility against the threats of a hostile external world.

In the first section of this chapter, I place the shift to a family-centered world in *TNG* within the context of developments in Internet and television-Internet convergence

technologies and the way in which these developments were articulated within the emerging hegemony of neoconservatism in the 1990s. Here, I propose the notions of the hypermobile family and reproductive techno-futurism as ways of understanding the dominant ideological construction of hypermobility technologies. I argue that in the series there is a notable tension between, on one hand, a normativizing of the biological nuclear family as the proper subject of hypermobility, and on the other, an opening to a utopian vision of "elective kinship" in which the hypermobile family is an expansive and self-selected one, breaking beyond the constraints of heteronormativity. I then turn to a reading of *DS9*, exploring the nexus of geopolitical conflict, wormhole travel, and nuclear family units in the series that renders palpable (though not uncritically) a uniquely neoconservative re-imagining of hypermobility and the divisions of private and public space, one in which faith is placed in the heteronormative family's capacity to transform the morality of a threatening public space via hypermobility technologies.

Next Generation Mobility

As a means of entry into grasping the construction of the hypermobile family in *TNG*, it may be helpful to briefly describe the *ST* universe and the relationship between *TOS* and *TNG*. In *TOS*, Captain James T. Kirk commanded the Federation starship *Enterprise* with the mission of exploring the universe and seeking out new alien life. In the future universe of *TOS*, earth is part of an intergalactic federation of planets, an organization aimed towards creating universal peace and fostering collaborative scientific exploration. *TNG* is set 75 years after *TOS* and focuses on the crew of the new *Enterprise* and its continuation of the original ship's mission under the leadership of its new captain, Jean-Luc Picard, a human from rural France. While in

TOS, the crew of the *Enterprise* was entirely human with the exception of Vulcan science officer Spock, the *Enterprise* of *TNG* boasts a slightly more multicultural crew. While still dominated by humans – including Picard, first officer Commander William T. Riker, Lt. Commander Geordi LaForge, Dr. Beverly Crusher and her son Ensign Wesley Crusher – the crew also includes the Betazoid (a humanoid species with empathic and telepathic abilities) Counselor Marianna Troi, Klingon security officer Lt. Commander Worf,[3] and Lt Commander Data, an android with a positronic brain (the only one of his kind). In terms of the geopolitical context of the two series, the primary enemies of the Federation in *TOS* were the Romulans, a warrior race closely related to the Vulcans, and the Klingons. The Federation has since formed an alliance with the Klingons but remains in a state of indirect conflict with the Romulans. *TNG* also introduces a new enemy, one that would become emblematic of the series: the Borg, a collective hive-mind of cyborgs seeking to assimilate all life forms into the collective. The Borg prove particularly interesting in terms of TNG's engagement with the cyborgian forms of new media technologies that constituted the Internet.

TNG was immensely popular for a SFTV series, consistently one of the highest rated original series on syndicated television.[4] In addition to a cult following inherited from *TOS*, *TNG* also gathered a strong mainstream network audience.[5] I would suggest that the popularity of the series highlights the resonance of the series' engagement with hypermobility that acknowledged and explored the anxieties while at the same time tending to resolve these

[3] Worf is also the only Klingon in Starfleet.
[4] Daniel Cerone, "'Star Trek' – Still on the Beam," *Los Angeles Times*, November 6, 1992.
[5] Greg Fuller, "Star Trek Ratings History," *Trek Today*, last updated July 7, 1999, https://www.trektoday.com/articles/ratings_history.shtml.

anxieties through the promise of a future post-capitalist liberal utopia to which hypermobility might ultimately lead.

The *ST* universe is predicated on technologically enabled hypermobility. The premise of the franchise is that humans have advanced technologically to the point that they are able to travel the universe discovering new lifeforms. The development of space ships that are able to travel faster than the speed of light has produced a new frontier, and Starfleet is engaged in the work of exploring and mapping this frontier.[6] The implications of *ST*'s vision of a hypermobile future, however, is perhaps most productively understood in terms of how this vision draws from and engages with historical and contemporary ideas about mobility. The sense of adventure evoked in the imagining of this future age of exploration in many ways mirrors that of Enlightenment-era European expansion and the new forms of economic, social, and technical mobility that enabled it.[7] While *ST* goes out of its way to reject the imperialistic violence of this earlier era – perhaps the franchise's most well-known idea is the Prime Directive, which prohibits Federation interference in "developing" civilizations – it is clear that mobility in this universe is produced in an uneven form, enabling the free movement of a privileged group while restricting or selectively enabling the mobility of other groups.

The particular shape this idealized form of mobility takes in *TNG*, however, is noticeably different to that of *TOS*. While in *TOS*, only the crewmembers themselves lived on the ship, in *TNG* the family of crewmembers are also an integral part of the ship's community. As a result,

[6] On the significance of the frontier in *TNG* and the *Star Trek* franchise in general, see Rick Worland, "From the New Frontier to the Final Frontier: *Star Trek* from Kennedy to Gorbachev," *Film & History* 24, nos. 1-2 (1994): 19-35

[7] For a more in-depth discussion of the relationship between Enlightenment and post-modern forms of mobility, see Caren Kaplan, "Transporting the Subject: Technologies of Mobility and Location in an era of Globalization," *PMLA* 117, no. 1 (2002): 32-42.

the hypermobility provided by the *Enterprise* is no longer the sole privilege of Starfleet members but is a resource shared among multiple family units inhabiting the space of the ship. As opposed to the individual crew quarters of the *Enterprise* in *TOS*, families now have their own private living spaces on the ship. This shift has to do, at least in part, with how ideas about media as hypermobility technologies changed within a shifting historical and social context. The move from *TOS* to *TNG* is one from television networks to networked computers, from the analog world of over-the-air broadcast television to the digital era of the Internet. While the majority of the audience watched *TNG* through analog cable service or over the air broadcast, it nevertheless emerged in a very different media world – one which its imaginative world shaped by hypermobility technologies reflected and interrogated – in which new digital media technologies produced shifts in cultural understandings of space, time, and movement, and the series itself would become part of these emerging media systems as it became available through digital cable and satellite networks. This shift entailed a particular ideological response that sook to construct a normative form of the hypermobile family, a construction in which *TNG* both participates and resists.

TNG, the Internet, and the Hypermobile Family

While television consumption in the US has historically been associated with the integrity of domestic space and the heterosexual family exemplified by post-war suburban life, with this ideological positioning of the medium often reinforced through televisual texts,[8] *TOS*

[8] Lynn Spigel, *Welcome to the Dreamhouse: Popular Media and Postwar Suburbs* (Durham and London: Duke University Press, 2001), 31-55 & 107-35.

had little to no interest in family drama. It was instead centered on the masculine adventures of a group of individual explorers in a way that was somewhat at odds with the generally perceived "feminine" environment of passive television spectatorship. Of course, this challenge to passive spectatorship did little more than to consolidate conventional gendered constructions of television as a technology of mobility, maintaining the integrity of the feminine private space while bringing the adventure of masculine public space safely into the private. However, something quite different was going on in the *ST* spinoffs that would emerge more than twenty years later. In *TNG* and *DS9* (as well as the second *TNG* spinoff *Voyager*) the focus on the individual masculine exploits of exploring new worlds in a seemingly endless universe was replaced by a more pronounced emphasis on the interpersonal dynamics of crewmembers and in particular on those between family members conceived both biologically and metaphorically. Whereas in *TOS*, family members were not allowed aboard the ship, and there is scant mention of any family members the crew may have left behind, families are a ubiquitous presence on *TNG*'s starship *Enterprise* and the titular space station of *DS9*. Why this sudden obsession with families? No doubt, this is a product to some extent of attempts to reach a wider audience and appeal to a new generation of viewers. However, it also suggests some interesting insights when viewed along concurrent shifts in media technology and in particular the emergence of the networked home computer and technologies of Internet-television convergence.

Why would increasing narrative attention in the *ST* universe to interpersonal family dynamics suggest a response to this technological shift? To answer that, we must consider some of the specific characteristics of the national ideological context of the era. The 90s saw

the growing hegemony of a neoconservative ideology that would become dominant after the attacks of 9/11.[9] In addition to calling for increased intervention abroad to insure the security of the US, neoconservatism also stressed the importance of national moral values at home. As Michael J. Shapiro argues, the neoconservative family values movement aimed "to install a commitment to the moral and political importance of the traditional family, a regulative ideal that is represented as both contractual and natural." This ideal family is a heterosexual and child-centered one, founded on traditional marriage and is perceived to be "threatened by non-'family friendly' media representations of extrafamilial attachments, sexualities, and life styles."[10] Crucial here is the idea that the traditional US family is under attack, its coherence and sanctity threatened by a host of social forces conspiring against it. Lauren Berlant notes that this traditional family "exists mainly as a negative projection, an endangered species, the shadow of a fetish called normalcy, which is currently under a perceived attack by sex radicals, queers, pornographers, and pop music culture."[11] This sense of the fragile traditional family as under attack produced a large scale backlash which manifested itself in, to give just a few examples, the establishment of the PMRC,[12] the growth of the anti-pornography movement,[13]

[9] See Harvey, Thompson, Wegner, Anna M. Agathangelou, "Bodies of Desire, Terror and the War in Eurasia: Impolite Disruptions of (Neo) Liberal Internationalism, Neoconservatism and the 'New' Imperium," *Millennium* 38, no. 3 (2010): 693-722, and Teixeira Poggio and Carlos Gustavo, "The convenient enemy -- neocons, global jihadists and the road to Iraq," *Meridiano 47 - Boletim De Análise De Conjuntura Em Relações Internacionais* no. 126 (2011): 4-11.

[10] Michael J. Shapiro, *For Moral Ambiguity: National Culture and the Politics of the Family* (Minneapolis: University of Minnesota Press, 2001), 1.

[11] Lauren Berlant, "Live Sex Acts (Parental Advisory: Explicit Material),"in *In Near Ruins*, ed. Nicholas B. Dirks (Minneapolis: University of Minnesota Press, 1998): 173.

[12] The Parents Music Resource Council was founded in 1985 by Tipper Gore, Susan Baker, Pam Howar and Sally Nevius to give more control to parents in regulating the access of their children to musical content deemed violent or sexual.

[13] See Lisa Duggan and Nan D. Hunter, *Sex Wars: Sexual Dissent and Political Culture* (New York and London: Routledge, 1995).

the passing of the Defense of Marriage Act,[14] and the demonization of single mothers and other non-normative family structures. Most of these examples, particularly the demonization of single mothers, also point to the ways in which normativizing discourses of the family were bound up in the structures of racism and classism.

Beyond representations in popular culture that threatened the normalcy of the traditional family, however, I want to suggest that the rise of neoconversative family values and its assertion that the family was in crisis can be understood within the rise to dominance of hypermobility. In particular, the emergence of the Internet as a pivotal force in this transition threatened to disrupt the tenuous spatial divisions upon which the "regulative fiction"[15] of the normative family was grounded. Along with other media technologies of hypermobility, such as digital television and virtual reality, the Internet threatened to erode the traditional heteronormative and patriarchal family structure, producing a conservative backlash that attempted to reterritorialize these destabilizing forces through the ideological construction of new media use as a family activity. More than previous consumer media technologies, the Internet-connected home computer provoked an acute fear of children gaining unmediated access to an un-sanitized public world, the ideological response to which was an attempt to resituate this emerging technology within a hetero-patriarchal domestic space constructed as a bastion against the social contagions of a hypermobile external world.

The rise of home Internet was also inextricably linked to developments in televisual technology, which were increasingly based on the same digital network structure of Internet

[14] The Defense of Marriage Act (DOMA), passed in 1996, defined marriage for federal purposes as a union between one man and one woman, thus denying federal recognition of non-heterosexual marriage.
[15] Berlant, 173.

technologies. This confluence resulted in hybrid forms of Internet-televisual technology, including most notably the Internet-enabled television (e.g. WebTV)[16] and the development of streaming video protocols for home computer use.[17] Given this convergence, it is not surprising that, in many ways, the anxieties provoked by the presence of Internet-connected computers in the US domestic space recalled those provoked by television in an earlier era. The Internet, like broadcast and cable television, opened up the home to the threat of social contagion, the incursion of images of Otherness that threatened the security and tranquility of the domestic space. However, while earlier fears around television circulated around ideas of a passive spectator being held mindlessly captive by the images radiating from the screen, the construction of the networked computer as an interactive device created quite different notions of naive but active explorers journeying into dangerous cyberspace. Among other threats, young Internet users venturing into cyberspace might encounter pornography, sexual predators, violent and sexually explicit video games, and other "offensive" media products. These fears, however, were at their core not, or not simply, about exposure to sex and violence, but rather registered a more profound disturbance of the spatial arrangement of the private/public boundary and the constructions of subjectivity and identity founded on this arrangement.[18]

[16] WebTV was first launched in 1996 and the service continued operating until 2013. While it never reached anywhere near the popularity of internet-connected home computers, it did help to pave the way for future internet-television convergence.

[17] See Sheila Murphy, *How Television Invented New Media* (Piscataway, NJ: Rutgers University Press, 2011) and William Boddy, *New Media and Popular Imagination: Launching Radio, Television, and Digital Media in the United States* (Oxford: Oxford University Press, 2004).

[18] For a particularly provocative exploration of these anxieties see Allucquere Rosanne Stone, *The War of Technology and Desire at the Close of the Machine Age* (Cambridge, MA and London: The MIT Press, 1996).

It is useful to consider here how the popular discourse around the Internet in the 90s ties into the broader construction of hypermobility. The discursive production of hypermobility merged two different ways of thinking of mobility. On one hand, mobility came to be conceived of as spatial collapse, the instantaneous connecting of two points in space, obliviating the need for movement in the traditional physical sense. The physics of the wormhole (see chapter 1), as we have seen, encapsulate this new sense of mobility. On the other hand, mobility continued to be understood in terms of physical travel, as movement of people through space. The persistence of embodied movement in fantasies of virtual mobility (as I discuss in chapter 2) illustrate the continuing salience of this understanding of mobility. The discourse around Internet technologies in the 90s trafficked simultaneously in these two understandings. The metaphors of "cyberspace" and the "electronic frontier" evoke conceptualizations of a space that must be traversed and explored by the user, and the notion of an "information superhighway" explicitly mobilizes imagery of physical transportation networks to make sense of new technologies. At the same time, however, discussions invoking these metaphors often position the Internet user as stationary, accessing flows of information rendered instantaneously available. The metaphor of the information superhighway provides a particularly illustrative example here. This metaphor originated in Vice President Al Gore's proposal for a National Information Infrastructure, and Gore frequently employed it in laying out his utopian visions for the Internet. In a speech to the International Telecommunications Union, Gore envisioned the potential for the Internet as a "planetary information network that transmits images and messages at the speed of light," a network of "information

superhighways on which all people can travel."[19] While the image of people traveling on the information superhighway is briefly invoked here, it is the former figuration of images and messages, or information, travelling at hyper-speed that dominates much of the discourse around the information superhighway. In another speech, Gore speaks of his vision of a schoolchild in his home town "being able to come home, turn on her computer, and plug into the Library of Congress."[20] The language of "plugging in" to the library evokes a quite different understanding of mobility in this situation than would "visiting" or "travelling to" the library. The Internet user is not herself mobile but rather has access to a mobile source of information. Here, the hypermobility produced by the Internet is not access to means of physical or virtual travel but the power to summon a fluctuating quantum flow of information in usable form while remaining spatially static. This is not to say that traditional understandings of travel are not still in play here but rather that it is no longer the individual subject that travels. On the information superhighway, it is information, not people, that travels.

This articulation of Internet hypermobility is of crucial importance on two fronts. On the first, it points to a utopian imagining of hypermobility that is intrinsically tied to the post-Fordist logic of late global capitalism in which the high-speed flow of information is privileged over the mobility of humans. On the second, it is pivotal in understanding the perceived threat to the traditional family posed by the Internet. The latter becomes particularly visible in discussions about the threat of cyberporn to young Internet users. Here, hypermobility as spatial collapse threatens to bring dangerous images into the sanctity of domestic family space, and it is in the

[19] Al Gore, "Information Superhighway," *Technology Teacher*, September 1994, 3.
[20] Al Gore, "Remarks Prepared for Delivery by Vice President Al Gore," *Ibiblio*, accessed January 15, 2017, http://www.ibiblio.org/icky/speech2.html.

context of this crisis that the ideological response of neoconservatism can be best understood. Al Gore's privileging of the child in his utopian imagining of the information superhighway was inversely mirrored in the centering of the child within the cyberporn panic of the mid-90s. As a now-infamous *Time* article on the threat of Internet porn put it, "[t]his is the flip side of Vice President Al Gore's vision of an information superhighway linking every school and library in the land. When the kids are plugged in, will they be exposed to the seamiest sides of human sexuality? Will they fall prey to child molesters hanging out in electronic chat rooms?"[21] These ominous questions resonated in the nation's capital as the cyberporn panic took hold of Congress. In 1995, Congress passed the Communication Indecency Act in an effort to censor cyber-pornographers. After the law was struck down by the Supreme Court, Iowa senator Charles E. Grassley pushed for new legislation, the Protecting Children from Child Pornography Act, to replace it. Arguing in support of the act at a congressional hearing, Grassley laid out what he saw as the imminent threat of Internet pornography. Echoing the neoconservative discourse around the crisis of the family, he laments, "[t]his has become a dangerous country in which to raise a family. Certainly there is far more to worry about now than when I was a child or, more recently, a parent raising kids."[22] Significantly, Grassley frames this threat in spatial terms that resonate with broader understandings of the relationship between the family and hypermobility:

> Until very recently, parents could breathe a little easier in their own homes. After all, the home is supposed to be a barrier between your children and the dark forces which seek to corrupt and destroy our youth. But enter the Internet and other computer networks. Suddenly, now not even the home is safe. Now

[21] Philip Elmer-Dewitt, "On a Screen Near You," *Time*, July 1995, 40.
[22] *Cyberporn and Children: The Scope of the Problem, the State of the Technology, and the Need for Congressional Action*, 104th congress (Washington, DC: U.S. Government Printing Office, 1995), 6.

> the dark forces which were once stopped by the front door have found their way into the home through personal computers.[23]

For Grassley and the family values crusaders he represents, the Internet is an existential threat to the sanctity of domestic space and the imagined division between the public and private spheres. The threat of cyberporn, notably, is framed not in terms of children venturing outside of the home via virtual networks where they face exposure to indecent material and potential predators but rather as these corrupting forces invading the home through computer networks. Just as in Gore's utopian vision of a student plugging in to the Library of Congress, it is not the young Internet user that is mobile but rather the streams of information that are rendered mobile and flow into the domestic space to be accessed. The hypermobility produced through the Internet was not a threat to the idealized neoconservative family unit because it rendered children mobile but because it obliterated the perceived spatial divisions protecting children from an unending flow of mobile contagions.

In the discourse around the Internet, then – particularly as it centered on the child – we find the Internet constructed as both the utopian future of the family and an existential threat to its integrity and stability. The contradictions of the dominant ideological configuration that emerged as it worked to negotiate the tensions between these two imaginings resulted in a new construction of hypermobility centered on what I call the hypermobile family – an understanding of mobility as a privilege bestowed on the family unit, rather than on the individual subject. For a world built around the hypermobile family, mobility is produced at the level of the kinship unit and it is the nuclear, heterosexual family instead of the individual

[23] Ibid.

Enlightenment subject that travels through space-time. The mobile family would thus become the collective subject interpellated by the discursive framing of hypermobility technologies.

TNG participates in this construction of the hypermobile family not only through its foregrounding of biological families but also through the construction of the *Enterprise*'s crew as a metaphorical family. In producing its new vision of the hypermobile family, *TNG* works to assuage the anxieties induced by the perceived threat to the normative family presented by hypermobility technologies through providing a hopeful vision of a non-biological hypermobile family traversing a utopian extrapolation of the information superhighway envisioned by Gore.

Compared to *TOS*, in *TNG* there is a much heavier focus on the interpersonal dynamics of the crew in a way that emphasizes the bonds among the crew as bonds of kinship rather than as fragile bonds of necessity between isolated individuals.[24] This is a particularly interesting shift within the context of the somewhat contradictory but powerful partnership between neoconservative and neoliberal ideology in the 90s. Neoliberalism's model of society, centered on the individual subject and their self-interest, legitimated global capitalist expansion and its colonization of the civic sphere, but it also threatened the stability of the familial and community bonds that preserved the hegemony of a hetero-patriarchal order. *TNG*'s imagining of the crew-as-family and centering of familial drama can thus be read as an attempt to mitigate the tension between the expansionary drive of global neoliberal capitalism and the

[24] While not connecting it to family or kinship, F.S. Braine similarly notes an increased "inner-directedness" in *TNG* as compared to *TOS*. Braine, 3-4.

exclusionary and provincial impetus of a neoconservative vision of hetero-patriarchal kinship structures.[25]

The bridge on the *Enterprise* serves as the media-technological hub of this hypermobile family-crew. Like the living room of the family undergoing integration into a new global society via media technologies of hypermobility, the crew gathers there to interact with the public world via the interfaces of control consoles and screens. It is here where the crew faces new threats and engages in encounters with new species, just as the new Internet user might engage with the threats and promises of the electronic frontier. The most central of the media technologies on the bridge is the viewer, the cinematic-type screen that occupies most of the space on the wall in front of the crew. The viewer could almost be mistaken as a window, functioning to show what is in the path of the ship, but it is in fact a computerized screen capable of displaying various viewpoints of the area around the ship or of individuals the crew is communicating with via video. Thus, we can see that media technologies of hypermobility are not peripheral to *TNG*'s construction of the crew-as-family but are in fact central to its imagination of the hypermobile family.

TNG's crew-as-family is structured around the patriarchal leadership of Captain Picard, which is marked by a firm but compassionate approach to "fathering" his crew. While reproducing the naturalness of patriarchal leadership within the family, Captain Picard presents an image of paternal masculinity that departs noticeably from that of the intrepid space

[25] Lee E. Heller notes there is a fundamental ambivalence regarding heterosexuality in TNG as the series "tries to imaginine utopian romantic configurations and ideal sexual others, only to tell us, first, that such relationships are necessarily heterosexual, and second, that heterosexuality is inherently unable to fulfill the desire it is supposed to serve." Lee E. Heller, "The Persistence of Difference: Postfeminism, Popular Discourse, and Heterosexuality in *Star Trek: The Next Generation*," *Science Fiction Studies* 24 (1997): 226.

explorer that had dominated space operas through the 80s. He is presented as emotionally complex and sensitive, emblematic of the "new man" that Susan Jeffords identifies as becoming the hegemonic figure of masculinity in the early 90s.[26] The patriarchal authority of the *Enterprise*'s family is also signified by Riker, who serves the role of substitute patriarch when Picard is not around. Dr. Crusher and Counselor Troi, on the other hand, are constructed as "mothers," serving more "feminine" caretaker roles as, respectively, the ship's doctor and counselor.[27]

Given that the command structure on the *Enterprise* is based on that of contemporary military vessels, we might read the close social bonds of the crew of the *Enterprise* as those of a military unit. However, the relationship between crewmembers often slips from military homosociality into bonds more identifiable as familial. Such slippage becomes particularly evident in the season two episode "Pen Pals." The episode opens with Picard on the holodeck preparing to embark on a simulated horse riding adventure and explaining to Troi his close relationship with horses. He tells her that "a fine war horse would sleep in a Bedouin's tent, carry him into battle, feed his children with her milk." Here, Picard describes a seeming military relationship in terms that evoke deep familial bonds – the sharing of domestic space and feeding of children – and provides us an insight into how he, and by extension the series, imagines the relationships aboard the *Enterprise*. Moreover, Picard explains the bond (between

[26] Susan Jeffords, *Hard Bodies: Hollywood Masculinity in the Reagan Era* (New Brunswick, NJ: Rutgers University Press, 1994), 153.

[27] Victoria Korzeniowska makes a similar point in regard to the feminized roles of Troi and Crusher. She argues that they "conform to today's stereotypes of femininity and occupy roles which perpetuate essentialist stereotypes of nurturance, sensitivity, and desire for romance rather than offering a vision of diversification of female potential." Victoria B. Korzeniowska, "Engaging with Gender: *Star Trek*'s 'Next Generation,'" *Journal of Gender Studies* 5, no. 1 (1996): 21. Also see Robin Roberts, *Sexual Generations:* Star Trek: The Next Generation *and Gender* (Urbana: University of Illinois Press, 1999).

human and horse) as one "created by mutual need," suggesting a vision of kinship based not on biology but on social reciprocity. Picard's ruminations on his own bond with horses help to frame the sub-plot of the episode, which focuses on the young Wesley Crusher being given his first command on a geological survey of a planet undergoing severe volcanic activity. To the extent that the *Enterprise* can be read as a family, Wesley plays a crucial role as the child and/or younger sibling of the other crewmembers, one whose upbringing becomes the collective responsibility of the crew. Early in the episode, the senior officers gather in the ready room to discuss whether or not giving Wesley the command is a good idea. Commander Riker, who initially proposes the idea, notes that he has "been given the responsibility of overseeing Wesley's education." Expressing concern that the command may be putting too much pressure on Wesley, Picard says "there is an old horse trainer's adage about putting too much weight on a young back. We don't want him to break under pressure." Here, Picard's earlier comments on his relationship with horses are linked to his, and the rest of the senior officers', relationship with Wesley. Again, the slippage between professional and familial relationships becomes evident and is explicitly noted by Dr. Pulaski when she comments, "we seem to be shifting the focus here. Are we talking about a young officer on a fast track to the academy or are we talking about a young man that we're guiding through adolescence and into adulthood?" While the former suggests a purely professional relationship, the latter evokes a strongly familial one, and while Pulaski's question is never explicitly answered, the officers' concern with balancing Wesley's development as a young Starfleet officer with that of an adolescent seems to suggest at least partially a more familial relationship at play. Indeed, when later in the episode Wesley comes to Ten Forward to ask Riker for advice, Riker excuses himself from the woman with

whom he is sitting simply with the words “family emergency.” The ensuing conversation between Riker and Wesley is shown through a shot-reverse shot montage of close-ups of the two characters’ faces, further underscoring the quasi-familial intimacy of the relationship between them.

To an extent, this construction of the crew-as-family serves to reproduce dominant ideologies about the family, naturalizing “masculine” and “feminine” roles within the patriarchal power structure of the family. Moreover, the rigid military-style divisions in rank between junior and senior officers, and between officers and the rest of the crew, suggest a less than egalitarian kinship formation. In expanding the definition of the family, however, through its metaphorical construction of the relationships among the crew as familial ones, *TNG* departs somewhat from the dominant neoconservative framing of the nuclear biological family as the only legitimate family unit and thus the only effective bulwark against the threats of hypermobility and proper inheritor of its promise. These “families” in *TNG* are not based on the determinacy of biological ties but are instead the product of elective kinship, in the sense that members of the crew chose to enter Starfleet and to serve on the *Enterprise*. Moreover, they are composed of members of different races and from diverse geographical locations. Data, of course, is not even a biological lifeform. Thus, these multi-species and cosmopolitan self-selected families present an image quite different to the neoconservative ideal of the traditional provincial family, one that might be read, given the general utopian future of *TNG*, as glimpses of a post-heteropatriarchal and post-capitalist society. At the same time, however, within the context of the historical era in which the series emerged, we might understand these alternative kinship units instead as a reflection of those formed in the real world in response to

the instabilities produced by late global capitalism.[28] This is not to discount the utopian potentiality of these alternative families but rather to recognize that any such utopian potentiality emerged only in dialectical relation to the destabilizing and destructive effects of capitalist expansion.

One example of TNG's production of these kinds of alternative kinship structures comes in the episode, "The Bonding." The ship's archaeologist is killed on a mission, leaving her son Jeremy (whose father had also died when he was very young) orphaned. The officers become personally invested in helping Jeremy through the grieving process. After Picard informs Jeremy of his mother's death, Jeremy remarks that he's "all alone now." Picard, however, is quick to comfort the young boy, telling him that "on the starship *Enterprise*, no one is alone." Picard thus suggests that the *Enterprise* is more than simply a professional workplace; indeed, it is an extended family in which "no one is alone," in which all members look out for one another regardless of the presence or lack of biological ties. Lieutenant Worf, who was commanding the mission that claimed Jeremy's mother's life, feels a particularly strong responsibility towards the boy. Worf himself was orphaned at the age of 6 when both his parents were killed in battle, and he was adopted by a human family. He asks Jeremy to participate in a Klingon bonding ceremony with him, which as he tells Jeremy, will make him part of his family: "we will be brothers from now on." While the word "brothers" here may evoke a sense of fraternal military bonding more so than a necessarily familial one, the fact that the responsibility Worf feels towards Jeremy is tied up with his own history of being adopted by his human parents and with his place within the "family" of the *Enterprise* suggests a relationship that can be conceived of

[28] Stacey, 6-7.

as more familial. Here, there is a lineage of elective kinship established from Worf's adoption by humans and joining the "family" of the *Enterprise* to his bonding with the human boy Jeremy, a lineage that transgresses boundaries not only between biological and social ties but even between species.

Nevertheless, there is still a compulsive heterosexuality at work in the series that limits *TNG*'s utopian vision of elective kinship. In "Evolution," when Dr. Crusher returns to the *Enterprise* after a year at Starfleet Medical, she is concerned about the development of Wesley, who appears excessively driven by his work and education with Starfleet and is not, in her opinion, having the experiences of a "normal" 17-year-old. In the final scene of the episode, however, she sees Wesley interacting flirtatiously with a female teenager, which helps to relieve her worries. She tells Guinan that this is what a 17-year-old boy should be doing. Thus, the forming of heterosexual romantic bonds becomes the signifier of normal adolescent development.

TNG also resorts to a reliance on Oedipal dynamics at times in its narrative explorations of the crew-as-family. As critics of Freudian psychoanalysis – most notably Deleuze and Guattari – have argued, the staging of the unconscious in terms of the Oedipal relationship serves a conservative function in curtailing productive forms of subconscious desire.[29] That is, understanding the relationship of the child to the family as an Oedipal one works to repress rather than enable the productivity of desire that might open up revolutionary possibilities. The most explicit staging of the Oedipal dynamic within the crew-as-family takes place in the

[29] Giles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (New York and London: Continuum, 1987), 29-43.

episode “Hollow Pursuits,” in which an underperforming engineer, Lt. Barclay, is spending large amounts of time on the holodeck playing out fantasies in which he challenges senior male officers – *TNG*’s figures of patriarchal authority – and has romantic rendezvouses with Counselor Troi – the crew’s hyper-empathetic mother figure. The holodeck here becomes a metaphor for the unconscious, a space wherein repressed desires can be realized. In Barclay‘s interactions with these same figures in real life, he is deferent, shy, and nervous. Noticing the decline in Barclay’s work ethic, the senior officers take an interest in him. Their discussion once again takes on the form of casual conversation among parents about how best to handle a situation occurring in their house. After LaForge, Riker, and Troi walk in on one of Barclay’s holodeck fantasies, he is embarrassed but goes on to find the cause of numerous gravity malfunctions on the ship. Barclay’s ultimate triumph in the real world earns him the respect of the senior crew and he resolves to stop spending time in the holodeck and to delete his programs. Thus, with the help of the crew, he is able to productively move beyond his immersion in a technologically-mediated Oedipal fantasy. The final act of this episode is particularly interesting as it evokes an image of parents walking in on their children’s own objectionable use of hypermobility technologies but then intervening to correct their child’s course and steer them back to the established family values, which entails the acceptance of the father’s authority and a renouncement of the desire to sexually possess the mother. However, the correction of Barclay’s improper use of the holodeck by the senior officers also dramatizes the dynamics of the construction of the hypermobile family as the younger crewmember, the figurative “child” of the *Enterprise*’s family in this case, is guided in the responsible use of new media technologies. Just as cyberporn represented a threat to children

within the discourse around family values, Barclay's objectionable use of the holodeck presents a threat to the health and safety of himself as a "child" in the *Enterprise*'s family. And just as children were thought of as needing to be instructed in the proper use of the Internet and other new media technologies so that they could become normative members of the hypermobile family, Barclay here must be guided by the senior crew of the *Enterprise* into becoming an acceptable member of the *Enterprise*'s hypermobile family.

Reproducing the Mobile Family: Picard as Father Figure

As the captain of the *Enterprise*, Picard is the primary representative of Starfleet, the organization within the Federation in charge of space travel, and as such is generally the character with the most direct control over the means of mobility. Thus, Picard might be seen as a particularly privileged character within the *ST* universe employed in constructing the normative ideal of the hypermobile citizen. As an upper middle class white male, Picard also embodies to a great extent the ideal subject of neoliberal-neoconservative ideology. However, in some ways, Picard, an older and childless single man, can be read as a "queer" character, particularly to the extent that reproduction is, as Lee Edelman argues, central to normative heterosexuality.[30] In the pilot episode, Picard is quick to express his annoyance with the presence of families aboard the enterprise upon meeting his new second in command Riker. "I'm not a family man," he tells Riker, "yet Starfleet has given me a ship with children aboard. And I don't feel comfortable with children." Picard's discomfort with children is potentially subversive within the context of a social order dominated by an image of the hypermobile

[30] Lee Edelman, *No Future: Queer Theory and the Death Drive* (Durham and London: Duke University Press, 2004).

family. However, rather than either preserving this subversive function or demonizing Picard, *TNG* attempts to redeem him as a surrogate father figure to the crew and, in particular, to the young Wesley Crusher. The pilot sets up the dynamic between Picard and Wesley in a scene where Dr. Crusher brings Wesley on the transporter with her to the bridge. As the transporter door opens, Picard at first only sees Wesley and angrily exclaims, "What the hell! Children are not allowed on the bridge!" Upon noticing Dr. Crusher, however, he quickly softens his demeanor and invites Wesley to take a look around the bridge, even letting him have a seat in the captain's chair and showing him the computer controls. The familial dynamic between the two characters becomes a frequent theme throughout the series.

The relationship between Wesley and Picard develops throughout the span of the series and becomes increasingly legible as a surrogate father-son relationship. The relationship is most thoroughly developed in the episodes "Samaritan Snare" and "Final Mission." Two seasons apart, both episodes involve Wesley and Picard undertaking a journey on a shuttlecraft together. Unlike the *Enterprise*, the shuttles, intended only for short-range transportation, are not capable of warp speed. It is thus significant that the series chooses to develop the relationship between Picard and Wesley in these episodes, as shuttlecraft travel represents a slow-speed mobility that appears obsolete within the hypermobile universe of *TNG*. Picard himself marks the antiquated nature of this mode of travel when he tells Wesley, in "Samaritan Snare," that the speed of their voyage is "more like [that of] a late 22nd century interplanetary journey." Situating the growth of their quasi-familial relationship within an environment shaped by a more traditional mode of mobility can be understood then as reflecting the neoconservative anxieties that the Internet and related technologies of hypermobility

threatened the security of the family that was supposedly fostered by an older, slower-speed form of mobility. Nevertheless, these short-range shuttle journeys are enabled by proximity to the *Enterprise* or other warp-capable vessels, and thus are still part of a network of technologies engaged in the production of hypermobility.

The shuttle journey of season 2's "Samaritan Snare" provides a glimpse into the early stages of the developing relationship between Wesley and Picard. Picard, who relies on an artificial heart as a result of being stabbed in a bar fight in his youth, must have the heart replaced. Unwilling to have the procedure done aboard the *Enterprise* by Dr. Pulaski on account of a fear it would make him appear vulnerable with the crew, Picard elects to travel to a nearby starbase for the procedure. Conveniently, Wesley is also travelling to the starbase to take his Starfleet entrance exam, and the two share a shuttle. The journey begins mostly in an awkward silence that is broken as Wesley blurts out, "You're not too comfortable with me. I understand." Picard ensures Wesley that this assumption is untrue, telling him "you are a fine young man." The conversation continues:

> Wesley: You don't have to say that sir. It's pretty obvious how you feel…Everyone knows. You don't like kids. That's too bad. You might have made a good father.
>
> Picard: Thank you
>
> Wesley: Don't you ever wish you had kids, sir?
>
> Picard: Wishing for a thing does not make it so.

The exchange between the two serves to links Picard's discomfort with children and his role as a potential father to his relationship with Wesley, implying the possibility of a surrogate father-

son relationship between Wesley, who lost his father – a Starfleet officer and close friend of Picard – when he died in the line of duty, and Picard, whose commitment to his career in Starfleet has precluded the possibility of fatherhood. As the journey progresses, Picard's demeanor softens and he opens up to Wesley, telling him the story of the incident that necessitated his artificial heart. It is significant here that Picard is adamantly opposed to the rest of the crew knowing about his medical condition but that he reveals the truth to Wesley, allowing him to see his vulnerability. This further suggests that the relationship between the two exceeds the military camaraderie of captain and crew and bleeds into something more closely resembling familial intimacy.

In season 4's "Final Mission," Picard and Wesley once again undertake a shuttle journey together, this time along with the captain of a mining shuttle to mediate a mining dispute on a nearby planet. While in "Samaritan Snare," the two shared a shuttle out of necessity, this time Picard specifically asks Wesley to join him on one last mission before Wesley leaves for Starfleet Academy, indicating the extent to which the relationship between the two has developed. The episode opens with Picard informing Wesley of his acceptance to the Academy. In his captain's log voiceover, after explaining the situation on the mining settlement, Picard says that he has "a far more personal matter" to attend to, and the episode cuts to Picard calling Wesley to the bridge to give him the good news. Significantly, Wesley's acceptance to the Academy is explicitly marked as a "personal matter" here in contrast to the Federation business of negotiating the mining dispute. While simply indicating that Picard and Wesley's relationship is a personal one, as opposed to purely professional, does not specifically suggest a familial relationship, as the episode develops, the relationship becomes increasingly

legible as that of a surrogate father and son. After the mining shuttle on which they are traveling malfunctions, Picard and Wesley – along with the mining shuttle captain – become stranded on an alien moon. When the three attempt to penetrate a force-field surrounding a spring (the only potential supply of water), a defensive mechanism generates a seismic disturbance in the cave and Picard sacrifices his own safety to save Wesley from a torrent of falling rocks and is severely injured. In a subsequent attempt to access the water, the shuttle captain is killed, and Wesley is left to care for the injured Picard, who is dying without medical help. As Wesley kneels by his side, the conversation between the two calls back to their first shuttle trip (in "Samartian Snare") and marks the development of their relationship into a quasi-familial one:

> Wesley: Do you remember when we took that shuttlecraft together to Starbase 515? I was dreading it. Six hours alone with you? But it didn't turn out the way that I thought. You opened up to me. I kinda…got to know you.
>
> Picard: Wesley, it's my fault that you're here. I shouldn't have asked you.
>
> Wesley: Sir, I'm honored that you wanted me along.
>
> Picard: I was selfish. I thought I…wouldn't see you again. I'm sorry
>
> Wesley: In the past three years, I've lived more than most people do in a lifetime. I think I'm very lucky, no matter what happens. How many people get to serve with Jean-Luc Picard. Sir…you don't know this, no one knows this, because I've never told anyone. All of the things that I've worked for, school, science projects, getting into the academy. I've done it all because I want you to be proud of me.

Perhaps most significant in this exchange is Wesley's confession that everything he's done has been to make Picard proud. While it might be expected that his endeavors after joining the

crew of the *Enterprise* would be undertaken with the goal of making his commanding officer proud, that even his achievements before this were aimed at gaining Picard's approval suggests a much more intimate relationship in which Picard has symbolically taken the place of Wesley's departed father.

What does the father-son relationship between Wesley and Picard have to do with *TNG*'s imagining of hypermobility? As I have suggested above, Starfleet represents the privileged hypermobility of the *ST* universe, and Picard is the primary embodiment of their authority. As Picard's surrogate son and a promising young Starfleet officer, Wesley represents the next generation (pardon the pun) of Starfleet, the guarantee of the continuing existence of the social order whose hegemonic locus is Starfleet and the Federation. Wesley thus serves a pivotal role in terms of both spatial and temporal mobility. By embodying the promise of the future, Wesley ensures the temporal movement of the social order beyond the present, a social order predicated on the privileged technologically-enabled hypermobility of Starfleet. The Picard-Wesley quasi-familial relationship ensures that the future will not be one of radical difference but rather of the reproduction of the current social order, which mirrors the role of social reproduction in capitalism and its investment in the inevitability of the future. As Nina Power argues, "capitalism depends upon the reproduction of sameness in the guise of difference, the idea that there is no alternative, and no future (in the sense of new ways of living) is possible."[31]

[31] Nina Power, "Non-Reproductive Futurism: Ranciere's Rational Equality Against Edelman's Body Apolitic," Borderlands 8, no. 2 (2009): 2.

Resisting the Borg

What I have attempted to demonstrate thus far is that *TNG* actively participates in the discursive construction of hypermobility as a mode of mobility that operates upon the family unit, affirming the family as the proper subject of hypermobility. In this way, it links up with discussions around the Internet and the family, both in the form of (neo)liberal celebrations of the information superhighway and the neoconservative anxieties about the threat of the Internet to the traditional family. While the utopian nature of *TNG*'s universe tends to emphasize the more celebratory narratives, it is worth pausing to consider how it is also shaped by anxieties over new technologies. As I have argued, the centering of the family in neoconservative discourse around Internet technology positioned the family as a barrier against the invasive and dangerous effects of the Internet. These threats posed by the Internet are given form in the Borg, *TNG*'s most well-known villain and its most extended engagement with the dangers of new technology. As a "collective" of bodies assimilated into a digital network of information exchange, often across significant distances, the Borg can be understood, at least in some sense, as a metaphor for the Internet and the merging of human bodies and consciousnesses into its cybernetic network. F.S. Braine argues that the Borg symbolize anxieties about new technologies as they "portray technology beyond human control, the organic consumed by the machine."[32] The Borg – humanoids heavily modified with artificial components – do not operate as individuals but rather as a collective hive mind, each unit connected to the collective through a wireless neural link. Both the merging of human and machine and the loss of individuality represented by the Borg echo popular fears around the

[32] Braine, 10.

Internet and computer technology. The *Enterprise* first encounters the Borg in the season 2 episode, "Q Who," when Q, an omnipotent entity, hurls the *Enterprise* to the other side of the universe to show Picard that humans are not ready for the threats the universe holds. After temporarily disabling the Borg ship in a firefight, an away team beams over to the ship to learn more about the new species. They find each Borg occupying one of a network of slots on the ship. Data surmises that "when they're in the slots, they become part of the whole, and are no longer read as separate lifeforms." He further "theorize[s] that the Borg are somehow interconnected through these slots, and are working collectively." The configuration described by Data here recalls that of individual computer users linking into a collective whole via electronic networks. Indeed, the episode as a whole provides a sort of parable about the potential dangers of the Internet, with the far reaches of the final frontier standing in for those of the electronic frontier. This is perhaps best summed up in Q's words of warning to Picard at the end of the episode: "It's not safe out here. It's wondrous with treasures to satiate desires both subtle and gross. But it's not for the timid."

The Borg, now aware of the Federation and humanity's existence, eventually make their way to Federation space and launch an assault on the *Enterprise* in the two-part season 3/4 episode "Best of Both Worlds." Having captured Picard, they assimilate him into the Borg collective, using him – no longer Picard but "Locutus of Borg" – as a human voice to represent the Borg to humanity, which they find necessary because humanity is an "archaic and authority-driven culture." Before being assimilated, Picard tells the Borg that humans will never submit because of their devotion to the ideas of "freedom and self-determination." Here, the cybernetic technology and decentralized information networks represented by the Borg is

envisioned as a threat to the ideals of Western democracy. However, it is in fact very similar technology that has enabled the utopian society of the Federation. Thus, there is a dichotomous imagining of new cyber technologies as both a threat to the continuation of democratic society and the necessary conditions for its progressive fulfilment, a dichotomy that mirrors that which we have seen in the views of the information superhighway as both the enabler of a utopian society of unlimited information exchange and a threat to the sanctity of domestic space and the development of children (the symbolic future of the social order).

Beyond representing the generalized threats of Internet technology, however, the Borg can also be read as signifying a particular threat to the normative family. If the metaphorical family of the *Enterprise* resembles the structure of the traditional family with a clear hierarchical structure and individual roles, the kinship structure of the Borg presents a radical difference to these norms, with a leader-less and decentralized structure devoid of individuals. While Picard is ostensibly chosen for assimilation with the Borg simply because he is a captain and respected leader, given the series' repeated emphasis on Picard's lack of familial ties – and attempts to redeem him by rendering him a symbolic father – we can read Picard's vulnerability to the Borg as a product of his existence partially outside the protective sphere of the family unit. It seems particularly significant, then, that after his encounter with the Borg, Picard returns – for the first time in over a decade – to his family home in France.

The Post-Human Future: Data and Reproductive Techno-Futurism

If the Borg provide *TNG*'s most threatening depiction of the fusion of humanity with cybernetic technology, the character of Data represents a much more optimistic image.[33] Like Picard, Data can be read as a queer character in that he is not the product of biological reproduction nor is he himself capable of biological reproduction.[34] He is also a cyborg, a liminal boundary character that destabilizes the oppositions between human and technology.[35] Data is a "Pinocchio" figure, as Riker frequently refers to him, an automaton that desires to become a real human. *TNG* goes to great lengths to establish Data's virtual "humanity" – most explicitly in the season 2 episode "The Measure of a Man" in which Data, with the help of Picard, legally establishes his right to self-determination – while at the same time constantly reminding the viewer that he is not biologically human but the product of cybernetic engineering.

Data is also himself a technology of virtual mobility. He can instantaneously access a seemingly infinite bank of information and can network with computer systems, thus serving as an interface between the crew and their media-technological prostheses. Indeed, Data can be read as an embodiment of the Internet, providing a source of information, friendship, and even sexual intimacy via engagement with a vast virtual network. In this context, Data's construction as "human" within the frameworks of family and reproduction serves as a point of articulation

[33] Braine notes that Data is the incarnation of a humanistic future as he is "intelligent and strong beyond human capacity, yet domesticated and entirely subservient to human needs." Braine, 9.
[34] Interestingly, Data is frequently read not in relationship to sexuality but to race as a representation of racial otherness or hybridity. See for example Rhonda V. Wilcox, "Dating Data: Miscegenation in *Star Trek: The Next Generation*," *Extrapolation* 43, no. 3 (1993): 265-77 and Margaret Rose, "Cyborg Selves in *Battlestar Galactica* and *Star Trek: The Next Generation*: Genre, Hybridity, Identity," *Journal of Popular Culture* 6 (2015): 1193-1211.
[35] On the concept of the cyborg as an entity that destabilizes boundaries, see Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York; Routledge, 1991), 149-181.

in the series between hypermobility technologies, reproductive futurism, and the hypermobile family. Data metaphorically renders technologies of hypermobility as operating within a capitalist hetero-patriarchal temporality of reproduction and historical progress. This is not to say that the series employs Data as a simply affirmative figuring of this temporality, but rather that Data makes these mechanisms visible as he both reproduces and challenges them. In this way, he serves as a metonymic signifier for tropes of hypermobility within the series and 90s SFTV more broadly.

To better grasp the role of Data within the *TNG*'s imaginative engagement with questions around hypermobility and the normative family, it is useful to briefly explore the relationship between heteronormativity, technology, and reproduction within the logic of what I term reproductive techno-futurism, as Data is employed both in the affirmation and subversion of this logic within the series. As Judith Stacey has argued, the political rhetoric of family values covered over the fact that the family was no longer (if it ever was) easily defined, and the definition of family in the 90s had been opened up to renegotiation in the wake of social shifts. Stacey points out that there was a fundamental ambivalence in the construction of what she terms the "postmodern family" that resisted traditional definitions and opened up new possibilities for the organization of kinship units.[36] The key point here is that if the definition of family is a historically shifting one, the fixing of this definition is inherently political and involves the hegemonic negotiation between the interests of dominant and subordinate groups. Given the notable flux within the hegemonic consensus concerning this definition in the 90s, the ideological nexus of neoliberalism-neoconservatism sook to consolidate its hegemony

[36] Stacey, 7-11.

via defining the family as a white, middle-class, heterosexual, and patriarchal institution positioned as a source of traditional values that would stabilize a chaotic public sphere. The hypermobile family constructed by neoconservatism is, then, a very specific and limited social formation. The symbolic and material resources of mobility are not afforded in the same way to non-heteronormative kinship structures (gay and lesbian families, polyamorous families, non-biological kinship units) or to working class and non-white families. This normative function of ideas about the family is particularly significant in regard to the future-oriented reproduction of capitalism. Capitalism has historically relied on normative family structures to ensure the material and ideological reproduction of a social order that enables its continued existence.[37] Within late global capitalism, the family has continued to act as a site for the social reproduction of hetero-patriarchal capitalist power relations. Recent work in queer theory, which has expanded Marxist and feminist critiques of family structure to interrogate the role of compulsory heterosexuality in constructing the normative family in Western capitalist society, is particularly instructive here. Elizabeth Povinelli, for instance, has argued that the Western mythology of the monogamous and heterosexual couple, grounded in Western ideas about love and intimacy, works to produce subjectivities tailored to the reproduction of capitalism.[38]

At the center of the articulation between the normative hypermobile family and the reproductive teleology of capitalism, there stands one crucial symbolic figure: the child. During

[37] The literature within Marxist Feminism on social reproduction theory has extensively explored this relationship between the family and the reproduction of capitalist social relations. See for example: Lise Vogel, *Marxism and the Oppression of Women: Towards a Unitary Theory* (Leiden and Boston: Brill, 2013); Susan Ferguson, "Canadian Contributions to Social Reproduction Feminism, Race and Embodied Labor," *Race, Gender, and Class* 15, nos. 1-2 (2008): 42-57; and Rebecca Jane Hall, "Reproduction and Resistance: An Anti-Colonial Contribution to Social-Reproduction Feminism," *Historical Materialism* 24, no. 2 (2016): 87-110.

[38] Elizabeth A. Povinelli, *Empire of Love: Toward a Theory of Intimacy, Genealogy, and Carnality* (Durham and London: Duke University Press, 2006).

the same Senate hearing at which Senator Grassley delivered his remarks (referenced above) on the need to protect the domestic space from the threat of cyberporn, Senator Strom Thurmond delivered a short statement in support of Grassley's bill in which he proclaims, "Our children are the future of this country. What they see and what they hear and what they do determine the kind of citizens they make. We must have the right environment for them, and we must guard in every way to see that they have the right associates."[39] Thurmond's comments make explicit what Lee Edelman has termed "reproductive futurism," the investment in the figure of the child with the reproduction of the political order. Within reproductive futurism, Edelman suggests, the "figural child alone embodies the citizen as ideal, entitled to claim full rights to its future share in the nation's good."[40] Crucially, this child-centered teleology operates within the logic of heteronormativity, privileging the child as the product of heterosexual reproduction. Reproductive futurism thus works to further the hegemony of the normative heterosexual family as a trans-historical necessity, ensuring in the figure of the child the persistence of this sacred institution. Linking Edelman's analysis with the contributions of other queer and feminist critiques, we can see how the figure of the child, as a product of heteronormative capitalist hegemony, embodies the promised reproduction not only of the national polity but of a global capitalist society in a way that re-entrenches the progressive temporality of neoliberal capitalism.[41]

[39] *Cyberporn and Children*, 32.
[40] Edelman, 11.
[41] Some of the valuable work that has been done in this vein includes: Heather Latimer, "Bio-Reproductive Futurism: Bare Life and the Pregnant Refugee in Alfonso Cuaron's *Children of Men*," *Social Text* 29, no. 3 (2011): 51-72; and Rebekah Sheldon, "Somatic Capitalism: Reproduction, Futurity, and Feminist Science Fiction," *Ada: A Journal of Gender, New Media, and Technology*, no. 3 (2013).

In respect to the construction of the hypermobile family, what is particularly important about Thurmond and Grassley's anxieties about cyberporn or Gore's vision of schoolchildren plugged into the information superhighway is that the figure of the child they invoke is the child-as-Internet user. In investing this figuration of the child with the hopes and fears about the Internet, the child as signifier of heterosexual futurity becomes intertwined with the future of Internet technology and its role in the production of the future social order. However, the relationship between technological progress and reproductive futurity doesn't end with the child as user of this technology but extends to the technology itself. This articulation produces what I am referring to here as reproductive techno-futurism to conceptualize the interlinking of reproductive futurity and technological progress within global capitalism. The homology between technological futurism and reproductive futurism means that new media technologies are frequently imagined as "children" of previous technologies, understood in terms of "generations" and "evolution." As Lisa Parks notes, televisual technologies like the VCR, satellite, and cable were conceptualized as network television's "offspring," and later technologies of TV-internet convergence were framed in terms of representing the "next generation" of television. Parks recognizes in these framings a "logic of evolutionary progress" that elides the more temporally complex dynamics at play.[42] Here, in the formation of a reproductive techno-futurism, the progressive teleology of global capitalism becomes yoked to not only conceptions of biological reproduction but also to technological evolution, with hopes and anxieties about the future invested in technological "children." The child thus comes to

[42] Lisa Parks, "Flexible Microcasting: Gender, Generation, and Television-Internet Convergence," in *Television After TV: Essays on a Medium in Transition*, eds. Lynn Spigel and Jan Olsson (Durham and London: Duke University Press, 2004): 33.

figure in a multiply-signifying fashion, connoting both a site of protective action to ensure the reproduction of capitalist heteropatriarchy through the construction of the hypermobile family and the cybernetic embodiment of technological progress.

In *TNG*, Data becomes crucial to probing this articulation of heteronormativity, reproduction, and technology that constitutes reproductive techno-futurism. Throughout the series, Data's progression towards becoming more human is developed through attempts to render him intelligible as human within a specifically heterosexual matrix. In "The Measure of a Man," Captain Picard is tasked with defending Data's status as a sentient crew member in a JAG hearing[43] when the scientist Commander Maddox wants to de-construct Data for examination, arguing that he should be allowed to do so on the basis that Data is Starfleet property, a "machine," and does not have the rights afforded to human crewmembers. In Data's defense, Picard asks Data about his personal belongings, which include a holographic picture of the deceased Lt. Tasha Yar, with whom Data had intimate relations. Data's heterosexual romantic connection with Lt. Yar is used to demonstrate that Data is more than just a machine, that he's a sentient life form. Significantly, the moment that most conclusively signals Data's symbolic acceptance as human is when, following the hearing, Maddox, who has consistently referenced Data as "it" throughout the episode, finally uses "he." The use of the gendered pronoun solidifies Data's humanity, turning him from an "it," an entity unintelligible as human, to a "he," a conscious subject rendered intelligible as human through his grammatical placement within a hetero-patriarchal sex/gender system. Thus, Data's quasi-humanity is established in the series

[43] The JAG (Judge Advocate General) hearing format is based on US military trials conducted under the authority of the Judge Advocate General.

through his assimilation into a heteronormative social structure. The potentially queering impact of the cyborg as boundary creature here is partially contained through a rendering of Data within heterosexual kinship structures that come to define the human.

Furthering this effort is Data's desire to become a father figure. In "Pen Pals," Data makes contact – in violation of the Prime Directive – with a young indigenous girl on a planet threatened by erratic geological activity. Data is so moved by the need to save this girl that he convinces Picard to allow him to beam down to find her when he can't reach her by radio. His desire to establish a relationship with and become a savior to the young girl can be read as an attempt to take on the symbolic role of fatherhood, particularly as he steps in to save the child when her own parents are unable to, taking on the role of substitute parent. Data's desire to be a father takes a more literal form in "The Offspring." In this episode, after attending a cybernetics conference, Data decides to create another android (whom he names Lal) that will be his child. The crew is initially perplexed by Data's actions and Picard is angered that Data had not discussed this with him. However, Data explains to them that, as he understands it, reproduction is an essential part of human life and he simply wanted to take part in this process. Data's understanding of reproduction is clearly constructed within the ideological constraints of heteronormativity and reproductive futurity. However, in designing his offspring through non-biological means – not to mention willingly becoming a single parent – Data queers the process of reproduction, thus upsetting and challenging the crew's implicit understanding of reproduction. The involvement of the crew, following a reluctant acceptance, is perhaps not surprisingly aimed first at rendering Data's offspring more legible within the normative sex-gender system. The first thing that needs to be done, Counselor Troi tells Data, is

to assign the offspring a gender. Since the android appears genderless, Data and Troi decide to give it the option of choosing a gender. The attempt to render the android legible through conscription into the binary sex-gender system works to neutralize the threat the agendered, non-biologically created android presents to the normative order. However, in allowing the android to choose its own gender, Data and Troi open up some space for a less determinate understanding of gender, one that returns agency to the gendered subject rather than an authority that reads the gender within the sex/gender binary system.

From this point, the episode alternates between Lal's development as a child – and Data's as a parent – and the attempts of Starfleet to force Data to give up his "daughter" to be studied and brought up in a more controlled environment. While the latter rehashes the same arguments about sentience and self-determination from "The Measure of a Man," the former presents an interesting case of the series' engagement with reproductive techno-futurism. As Lal develops, Data quickly discovers that she has surpassed his own abilities. She is able to speak in contractions and to feel emotions, both of which Data is ostensibly incapable of. Lal represents an evolutionary step beyond Data. Here, biological and technological evolution become increasing interwoven as the production of new generations of technology is explicitly linked to biological reproduction and its role in the social order. Data's reproduction through Lal gives narrative form to the imagining of new digital technologies as the children of previous ones within a progressive teleology. Lal's evolution, however, leads not to progressive developments bearing utopian promise but rather to the tragedy of Lal's self-destruction. Her android body apparently unable to support her rapid development, Lal's systems undergo complete failure, and Data is unable to save her (although he downloads her brain into his

own), throwing the teleology of reproductive techno-futurism into question. Perhaps, however, the "death" of Lal represents something other than simply the failure of reproductive techno-futurism's progressive teleology. The impossibility of Lal's continuing existence also points to the intertwining of racialization and reproductive futurism.[44] While I have been reading Data primarily as a signifier of queerness, we might also read Data as a representation of racial difference. As Rhonda Wilcox argues, the prejudice Data is subject to in the series renders him legible as a representation of racial oppression.[45] Indeed, the necessity of Data's failure in his attempts to reproduce might best be understood if we recognize Data's representation as queer as inseparable from his representation as non-white. As a signifier of both racial and sexual difference, Data poses a double threat to the normative social order. If the series attempts to negotiate the threat posed by his queerness through his participation in the process of techno-biological reproduction, his exclusion from the status of whiteness renders the offspring of this reproduction unsuitable as a signifier of the futurity of the Federation.

As we see in "The Offspring," Data becomes a figure signifying the convergence of biological and technological reproduction, representing the post-human not as a radical break from the human but an evolutionary extension of it within a sped-up linear temporality.[46]

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[44] On the inter-articulation of race and reproductive futurism, see: Latimer; Sean H. Wang, "Fetal Citizens? Birthright citizenship, reproductive futurism, and the "panic" over Chinese birth tourism in southern California," *Environment and Planning D* 35, no. 2 (2017): 263-80; Eithne Luibheid, *Pregnant on Arrival: Making the Illegal Immigrant* (Minneapolis: University of Minnesota Press, 2013); and James Bliss, "Hope Against Hope: Queer Negativity, Black Feminist Theorizing, and Reproduction without Futurity," *Mosaic: A Journal for the Interdisciplinary Study of Literature* 48, no. 1 (2015): 83-98.

[45] Wilcox, 265.

[46] In this sense, Data's construction as a cyborgian figure resonates with work that has identified the cyborg as a liminal figure that does not reject the human but blurs the line between human and computer. However, it also, in presenting him as an advancement along a timeline of human and technological progression, reproduces a form of post-humanism that sees the merger of humanity and machine in teleological terms. On the former, See Haraway and Scott Bukatman, *Terminal Identity: The Virtual Subject in Postmodern Fiction* (Durham and London: Duke University Press, 1993). On the latter, see the critique of posthumanism in N. Katherine Hayles, *How we Became*

Picard makes this significance explicit in "The Measure of a Man" when he argues that Data's creation is not technically different from the human production of a child. Data, he contends, is the materialization of his creator's vision just as "children are created from the building blocks of their parent's DNA." He even links the existence of Data to Starfleet's mission of discovering biological diversity: "Starfleet was founded to seek out new life. Well there it sits." Here, we once again discover the Enlightenment dictum of discovery indicated in the production of modern mobility that is predicated on the object-status of those whose mobility is to be regulated.

Data provides the series a useful device by which narratives of social and technological progression are articulated via the narrative convergence of biological and technological families. Often, narratives centered on Data's familial role are interwoven with plot lines focused on drama within biological family units, as in the episode "Brothers." After a young boy living aboard the Enterprise plays a prank on his younger brother, things go horribly wrong and the younger brother ingests a potentially fatal poison. The crew are close to a Starfleet medical station, and are taking the boy there for treatment. On the way, however, Data suddenly begins to malfunction and takes control of the ship, taking it to an unknown destination. The crew struggles to gain control of the ship from Data, but are unsuccessful. Here, Data's technological capabilities afford him control over the *Enterprise*, relaying fears of hypermobility technologies exceeding human control. Meanwhile, the young boy refuses to talk to his brother, with whom he is angry because of the prank. When the ship reaches the programmed destination, Data

Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics (Chicago and London: University of Chicago Press, 1999)

transports himself down to the surface where he finds himself being inspected by an old man who, he soon finds, is his creator Dr. Soong, thought to be dead. Dr. Soong is dying, and he has recalled Data to see him before he dies. Dr. Soong asks his android creation, who is modeled on his own physical appearance, "How do you feel, Data? You've found your long-lost father and he's alive!" Dr. Soong's greeting specifically marks the relationship between himself and his creation as one between father and son. Interestingly, while Soong refers to himself as Data's father, Data tends to maintain a more formal tone, calling Soong "sir" in keeping with his Starfleet training. Nevertheless, the conversation between the two seems very much like one that might occur between a father and son upon reuniting after many years. Soong begins by asking Data about his career decisions and subsequently expressing his disapproval:

> Soong: I gave you the ability to choose whatever you wanted? To do whatever you wanted? Why Starfleet?
>
> Data: It was Starfleet officers who rescued me.
>
> Soong: So you decided to emulate your emancipators? How disappointing
>
> Data: What choice of vocation would have met with your approval, sir?
>
> Soong: Well, I often hoped you might become a scientist. Perhaps even a cyberneticist.
>
> Data: To follow in your footsteps, as it were.

Soong here thus expresses what could be understood as a paternal wish that Data had decided to follow in the footsteps of his "father." As the conversation between the two continues, Data inquires as to why Soong chose to create him. In lieu of a direct answer, he asks Data about

humans' fascination with "old things," which Data reasons represents a human need for continuity.

Data: Humans are mortal. They seem to need a sense of continuity

Soong: Why?

Data: To give their lives a sense of meaning, purpose

Soong: And this continuity. Does it only run one way? Backwards to the past?

Data: I suppose it is a factor in the human desire to procreate.

Soong: Oh, so you believe that having children gives humans a sense of immortality, do you?

Data: It is a reasonable explanation to your inquiry, sir.

Soong: And to yours as well, Data.

Not only does this discussion establish that Soong's creation of Data is understood metaphorically as an act of procreation, it also invokes the trope of reproductive futurism. Data's observation that humans need continuity into the future and that having children provides them a means to immortality suggest an understanding that, to put it in different terms, children are the symbolic currency of social reproduction, and that Data represents the offspring of the merging of the drives for social and technological reproduction.

The episode holds a further twist though. Data was the second android built by Soong. The first, Lore, was – unlike data – equipped with basic emotions. These emotions, however, made Lore unstable and Soong disassembled him. Later, though, unbeknownst to Soong, Lore was reassembled, becoming a villain opposed by Data and the *Enterprise* in an earlier episode.

The homing beacon activated by Soong to bring Data to him also inadvertently brings Lore, who arrives unexpectedly to Soong and Data's reunion. Upon Lore's arrival, Soong remarks, "Looks like we have ourselves a family reunion." Lore clearly feels abandoned by Soong and jealous of Data. Upon realizing Soong did not intend to bring him, Lore says, "Since I seem to be an uninvited guest at your little party, I'll leave you with your beloved son and be on my way." His conversation with Soong continues to express a sense of familial abandonment. "I would have proven myself worthy to you if you would have just given me a chance," he tells Soong, "but it was easier just to turn your back and build your perfect Data." Here again, the relationship between Soong and his technological creations is rendered as a familial one between father, sons, and brothers, marked by the familiar tensions of family drama. As the episode draws to a close, Lore leaves and the *Enterprise*, having finally been able to override Data's hijacking, arrives at the planet. Before returning to the ship, Data takes a moment to say goodbye to Soong:

> Data: Do you believe that we are somewhat alike, sir?
>
> Soong: In many ways, I believe
>
> Data: Then it is alright for you to die, because I will remain alive…You know that I cannot grieve for you, sir.
>
> Soong: You will in your own way…goodbye, Data
>
> Data: Goodbye…father

The exchange here is notable for a couple reasons. For one, Data finally breaks from calling Soong "sir" and refers to him as "father," suggesting a full recognition of their relationship as a familial one. Additionally, it signals Data's embrace of the ideology of reproductive futurism.

While the estranging character of Data's earlier observations on the need for procreation offered a potential for a critique of reproductive techno-futurism, this potential is closed off as Data here willingly inserts himself into a temporality of reproductive futurity in which biological, social, and technological reproduction converge.

DS9 and the reterritorialization of home

DS9 centers on the crew of the Federation-Bajoran deep space station Deep Space Nine. The station was founded in the wake of the liberation of the planet Bajor from the colonizing Cardassians after a long and violent occupation. The Federation offered its support in helping to rebuild Bajor and securing its autonomy. While led by the Federation commander (and later captain) Benjamin Sisko, the station is under joint control of the Federation and the Bajoran Militia, with the former represented by Major Kira Nereen. Comprising the rest of the senior crew are Lieutenant Jazira Dax, Doctor Julian Bashir, Engineering Chief Miles O'Brien (who served as the transportation engineer aboard the *Enterprise* in *TNG*), Security Chief Odo, and in later seasons Lieutenant Warf (also from *TNG*). Commander Sisko, accompanied on the station by his son Jake, accepts command of DS9 following shortly after the loss of his wife and Jake's mother in the Borg battle depicted in seasons 3 and 4 of *TNG*. While the station originally serves as a somewhat minor diplomatic outpost, it soon takes on much greater tactical importance for the Federation when a stable wormhole is discovered close to the station that connects the Alpha Quadrant to the largely uncharted Gamma Quadrant on the opposite side of the galaxy. In the Gamma Quadrant, the crew of DS9 come into contact with the Dominion, a secretive political organization that controls most of the quadrant. Tensions continue to grow

between the Federation and the Dominion, leading eventually to the Dominion-Federation war that becomes the focus of the narrative for the majority of the series.

DS9, while remaining relatively popular throughout most of its run, never achieved the high ratings of *TNG*.[47] Many *ST* fans were critical of the franchise because they felt its somewhat darker vision of a more morally and politically ambivalent Federation departed from *TOS* and *TNG*'s utopian vision.[48] Star Trek creator Gene Roddenberry, who passed away before *DS9* aired, was reportedly unhappy with *DS9*'s take on the federation as it was presented to him in its early development.[49] *DS9*'s departure from previous *ST* series in its willingness to critique the liberalism at the heart of *ST*'s utopian vision of the future (see below) seemed to produce a discomfort for viewers invested in *ST*'s uncritical liberal utopianism.

If *TNG*'s imagining of hypermobility is framed primarily within the mobility-as-travel paradigm, *DS9*'s universe is undergirded more heavily by the understanding of hypermobility as the annihilation of space. While warp-speed travel is still a part of *DS9*'s diegetic world, the primary focus is on a newly-discovered stable wormhole that bridges the Alpha and Gamma quadrants of the galaxy. Notably, the differences in the imagining of the family in *TNG* and *DS9* are linked to these contrasting imaginings of hypermobility. Whereas *TNG* is primarily set on board the starship *Enterprise*, a perpetually mobile space, *DS9* is set on a space station as opposed to a ship. Thus, the primary locus of the narrative is a stationary rather than mobile

[47] Fuller
[48] "Robinson on Why he Couldn't Leave Garak Behind," *Trek Today*, last updated June 1, 2002, https://www.trektoday.com/news/010602_02.shtml; Eleanor Tremeer, "To Boldly Stay: How Deep Space Nine Upended Star Trek by Exposing Utopia's Dark Side," *io9*, last updated March 1, 2018, https://io9.gizmodo.com/to-boldly-stay-how-deep-space-nine-upended-star-trek-b-1823186821.
[49] Judith Reeves-Stevens and Garfield Reeves-Stevens, *The Making of Star Trek Deep Space Nine* (New York: Pocket Books, 1994).

space. The stationary setting of *DS9* helps to underline the importance of stability and security provided by the domestic space in a hypermobile world. However, rather than being isolated from the flows of people and information enabled by hypermobility, the station is a major node within a network of hypermobile flows, just as the Internet-connected household becomes a node for crisscrossing flows of information and images. The station becomes a signifier for the imagined space of the family within the ideological climate of the early-mid 90s, no longer situated on utopian vessels of unfettered mobility but instead perched at the strategic junction of mobility and stasis. Although many episodes during the Dominion War of the later seasons take place on the *Defiant*, a Starfleet ship captained by Sisko and crewed by select members of the DS9 crew, this vessel functions exclusively as a battle ship and not a vehicle for exploration like *TOS* and *TNG*'s *Enterprise*. While the hypermobility enabled by space-travel technology in *TNG* is imagined in a utopian form as the freedom to explore and expand the frontier of human life, hypermobility in *DS9* is noticeably more fraught, associated more with threat than promise. We see this predominantly through the journeys of the DS9 crew into the Gamma quadrant. A recently discovered stable wormhole near DS9 allows for almost instantaneous travel to the Gamma quadrant, located millions of light years away from the Alpha quadrant within which the station is located. However, unlike the frontier spaces of *TNG*, typically rather primitive and politically unorganized, the societies of the Gamma quadrant are already undergoing integration into the powerful control of the Dominion. The Gamma quadrant is thus not a promising unexplored frontier but an already determined and threatening space hostile to the hegemony of the Federation, and the hypermobility produced by the stable wormhole appears

increasingly framed within a dystopian vision of a hostile external social world. The dangers of this hypermobility are explicitly represented through the hypermobile family.

Whereas the crew of the *Enterprise* in *TNG* is heavily coded as a symbolic family, the crew of DS9 is not imagined in these terms. The relationships among the crew are instead constructed as bonds of professional association or friendship, not the bonds of kinship. In this sense, the relationship among the senior crew is much like that between the crewmembers of the *Enterprise* in *TOS*. However, unlike *TOS*, *DS9* focuses heavily on the dynamics of relationships within the biological family units onboard the station. Thus, it might be argued that *DS9* somewhat closes off the utopian opening provided by *TNG*'s vision of elective kinship in the crew-as-family through a re-centering of the biological family, a shift in line with the strengthening hegemony of neoconservatism evidenced in the republican revolution of 1994. I would suggest, in fact, that *DS9*'s engagement with kinship and the hypermobile family can best be understood in relation to the emergence of neoconservatism and its articulation with neoliberal capitalism.

DS9 highlights, in ways that both affirm and critique, the ideological configuration resulting from neoconservatism's ambivalent response to the perceived threat of the Internet for the normative family. Given this threat to the child, as the privileged figure of the heteronormative family, the Internet presented, it might seem that the response of neoconservatism would be purely a reaction against this new technology. However, this was far from the case. To understand why, we first must make sense of the way in which the ideologies of neooconservatism and neoliberalism became intertwined in the emerging hegemonic configuration in the US. While both ideologies legitimate the maintenance and expansion of

class power, neoconservatism is founded on an obsession with order that seems at odds with neoliberalism's enthusiastic embrace of individual freedom. However, these differences did not render the ideologies incompatible but rather enabled neoconservatism to effectively mollify the contradictions of neoliberalism. As David Harvey has argued, neoconservatism provided an answer to the threat that, under neoliberalism, "the chaos of individual interests can easily end up prevailing over social order."[50] While the anarchy of the market under neoliberalism was crucial to the expansion of global capitalism, the maintenance of class power in the US rested on a cohesive social order, and neoconservatism provided the ideological force necessary to preserve this order.

Grasping this articulation of neoliberalism and neoconservatism also helps us in understanding neoconservatism's paradoxical response to the threat of hypermobility. I have pointed out that the same framing of hypermobility vis-à-vis the Internet – as the high-speed flow of information into the domestic space – underlays both a celebratory capitalist vision of the instantaneous movement of capital and anxieties about the threatened sanctity of the traditional family. While the latter, as we have seen, is central to the neoconservative framing of hypermobility, the former is crucial to neoliberal ideology. Sociologist Ben Agger argues that the Internet has operated to intensify the speeding up of what he terms "fast capitalism," the central effect of which has been the increasing penetration of the public world into the private space of the home and family.[51] Capitalism is, however, a fundamentally contradictory formation, and these contradictions are manifested in the Internet, as they are in the marriage

[50] David Harvey, *A Brief History of Neoliberalism* (Oxford: Oxford University Press, 2005), 82.
[51] Ben Agger, *Speeding up Fast Capitalism: Cultures, Jobs, Families, Schools, Bodies* (Boulder and London: Paradigm, 2004), 3-7.

of neoliberal economic and neoconservative political ideologies. While for neoliberalism – which had emerged as the hegemonic ideology of global capitalism during the 80s – the Internet was a tool for the intensifying penetration of capitalism into new social spaces, neoconservatism, while embracing neoliberalism's faith in unregulated free markets, seemed to fear the destabilization of the nuclear family this intensification produced. Thus, while Agger sees the erosion of boundaries produced by the Internet as largely complicit with hegemonic political interests – and in fact argues for the "reboundarying" of the home as a space of critical distance from fast capitalism[52] – I would suggest that neoconservatism was, somewhat paradoxically, both a backlash (and in this sense not unlike Agger's response) against the deboundarying effected by the Internet and an embrace of the spatial collapse between public and private, and much of its strength as an ideology lay in being able to sustain this paradoxical formation. Just as neoconservatism worked to mollify neoliberalism's tendency towards the anarchic pursuit of individual interests, its particular conceptualization of hypermobility operated to balance neoliberal capitalism's embrace of the Internet as a force of radical deboundarying. As political scientist Michael J. Thompson argues, neoconservatism saw liberalism as a failure "due to its emphasis on the liberty of the individual and the separation between public and private, which has starved the public sphere of morality and the guidance of tradition and authority."[53] As a backlash to the deboundarying effect of the Internet, neoconservatism responded not by attempting to reconsolidate these boundaries but rather by embracing the collapse as an opportunity to shape the morality of public space while

[52] Agger, 153.
[53] Michael J. Thompson, "Introduction: Confronting the New Conservatism," in *Confronting the New Conservatism: The Rise of the Right in America*, ed. Michael J. Thompson (New York and London: NYU Press, 2007): 3

celebrating the expansion of capitalism. As Lauren Berlant has argued, this worked to produce an "intimate public sphere" wherein "conservative ideology has convinced a citizenry that the core context of politics should be the sphere of private life."[54] The result was the establishment of what Thompson calls a "new provincialism" that "not only possesses an economic agenda to expand the power and influence of capital, but…has also given room to the provincial and antiliberal traditions and sectors of American society that are firmly based in homogenized suburban enclaves that emphasize 'family values' and domesticity."[55] Given American capitalism's contradictory needs of the expansive and instantaneous flow of information and for an inviolable domestic space that could sustain the stable hetero-patriarchal family structure – a contradiction between the needs of production and reproduction – the rise of neoconservative ideology was an effort to resolve this contradiction. As one critic notes of its contradictory ideological formation, neoconservatism "embrace[s] the liberal principles that justify the free market, but…seek[s] to prevent the logical extension of those very same principles so that they cannot be used to eliminate male dominance, economic injustice, and heterosexual privilege,"[56] and, I would add, white privilege.

At times, *DS9* works to legitimate neoconservatism's exclusionary heteronormativity, particularly in its representation of non-normative kinship structures. Perhaps the most notable example of this is the Dominion. In the two-part episode, "The Gem'hadar," we find that the Dominion are in fact controlled by a planet of shape-shifters or "changelings" known as the

[54] Lauren Berlant, *The Queen of America Goes to Washington City: Essays on Sex and Citizenship* (Durham and London: Duke University Press, 1997), 3.
[55] Thompson, "America's Conservative Landscape: The New Conservatism and the Reorientation of American Democracy," in *Confronting the New Conservatism,* 20.
[56] R. Claire Snyder, "Paradox or Contradiction: The Marriage Mythos in Neoconservative Ideology," in ibid., 147.

Founders. Odo, DS9's security chief, is a shape-shifter but has never met any others of his species until traveling to this planet in the Gamma quadrant, to which he feels instinctively drawn. Odo is at first excited to finally meet his fellow shape-shifters, who welcome him to his long-lost home. He asks if his family is there and if he can meet them. "You already have," one of the Founders tells him. "We are all part of the Great Link." The shape-shifters are one unified kinship unit connected through this Great Link, a liquid and amorphous merging of the Founders in a kind of primordial sea. By the end of the episode, however, we discover that in response to being treated as outcasts by humanoid species, the shape-shifters created the Dominion to impose order on the universe. Thus, rather than being portrayed as either a source or sign of democratic change, the non-normative kinship unit is here explicitly linked to a quasi-fascist ideology and a totalitarian drive towards domination. Odo ultimately sides with the Federation and its normative family structures – represented in the episode by Commander Sisko and Jake, who are kidnapped by the Dominion – against his own family, identifying with the democratic ideals it represents. More significantly, however, it is Odo's desire for a monogamous relationship with Kira that will sustain his resolve to reject the founders throughout the series. Thus, the security of the heteronormative romantic relationship and the democratic ideals with which it is associated via the Federation is held up in contrast to the queer kinship structure represented by the Founders.

The Federation family in *DS9,* on the other hand, becomes a space of refuge from an increasingly uncertain social and political world. *DS9* departs significantly from *TNG*'s utopian vision of a future in which the enlightened humanist morality of the Federation inevitably overcomes the forces of oppression and domination. This is no longer an inviting universe of

expanding horizons and new frontiers, but a hyper-globalized social world collapsing in on itself, rendering the rise of the Dominion as the dialectical inverse of *TNG*'s historical progress. If the hypermobility technologies of *TNG* were imagined as forces building a utopian version of the information superhighway or electronic frontier, these technologies in *DS9* are the harbinger of the threats posed to these utopian visions. This is not to say that *DS9*'s universe is a hopeless one however. Indeed, there is one explicit source of hope: the close bonds of the heterosexual family. *DS9*'s social vision is thus one structured by a neoconservative embrace of the collapse between public and private spheres as a wellspring of a new public morality. Odo's journey throughout the series is emblematic of this spatial reorientation. Initially choosing to remain with the Federation out of a preference for its more democratic ideology, Odo returns to live with the changelings in the final episode of the series following the conclusion of the Dominion War. Odo brings with him, however, the insights he has gained from the Federation which allow him to transform changeling society through his re-insertion into the Great Link. This ideological transformation takes on a physical form as Odo's rejoining brings life back to the link, which Odo notes is dying. When Odo re-enters the link, represented visually as a vast ocean, the dull color of the dying link suddenly begins to brighten. Here, the domestic space of the Federation serves to generate a reterritorializing force through Odo that can transform and domesticate a hostile external social world.

The Siskos and the O'Briens

While the diverse cast of characters in *DS9* all play an important part in the series' construction of the mobile family, there are two family units in the series that are particularly

central to the dramatic tension of the series. One is that of Ben Sisko and his son Jake, a family relationship shaped by the absence of Ben's wife and Jake's mother. The other is Chief Miles O'Brien, his wife Keko, their daughter Molly, and later a son, Kirayoshi. Both of these families represent the threats posed to the institution of the normative family by the technological and social changes of a hypermobile world as well as the attempt to reconsolidate the security of the family in the face of these threats. In different ways they embody the ideal of the normative family. However, both families bear the marks of the forces that have destabilized the institution of the family. In the case of the Siskos, this mark is clearly the effect of Ben Sisko's wife's death, which has left Sisko as a single father seeking to strengthen his relationship with his son.

Interestingly, both of these families are explicitly connected to the narrative of *TNG*. Commander Sisko's wife was killed in the Borg attack on the federation depicted in the *TNG* season 3 finale and season 4 opener. Chief O'Brien was a secondary character on *TNG*, and the season 4 episode "Data's Day" revolves around his and Keke's wedding. It is significant here in terms of the relationship between the normative family and technologies of hypermobility that Sisko's wife was killed during an attack by the Borg. In the *ST* universe, the Borg – much like the Cybermen in *Doctor Who* or the Replicators in *Stargate* – come to represent the threat of a world fully integrated by cybernetic technology, no longer held in check by the humanizing impulses embodied by the Federation. The technologically-enabled mobility of the Borg is produced in a different way than that of the Federation or its other enemies. Rather than simply traveling and establishing an intellectual or military presence in new areas, the Borg use

their technology to integrate (or assimilate) bodies and minds into the Borg collective, thus expanding the numbers and spatial domain of the collective.

Despite the ways in which the Siskos are employed by the series as representatives of the heteronormative family, they do not embody its ideal perfectly. Significantly, they are also a black and single-parent family, both attributes that marked families as non-normative or pathological within the political order of the mid-90s. This fact opens up the centering of the Sisko family to seemingly contradictory readings. On one hand, it could be understood as an attempt to subtly challenge the hegemonic model of the normative family, opening it up to families that don't fit the white, two-parent ideal. On the other, it might be read as a way of rehabilitating the pathological black, single-parent family into the normative order.[57] Perhaps, though, these readings are not quite as contradictory as they seem but rather illustrate the dynamics of the hegemonic equilibrium through which figuring of the postmodern family (to borrow from Stacey once again) is negotiated. It is arguably, then, the ambivalence of the family and its place in a shifting social and political order that is rendered legible through *DS9*'s presentation of the Sisko family as its privileged model.

The Siskos are also closely linked to technologies of hypermobility through Ben's association with the wormhole and its creators. The wormhole was created by an ancient and advanced alien race (a key trope for wormhole travel, as I note in chapter 1) that exists in a dimension outside of the space-time inhabited by humanoid and other alien races. From the beginning of the series, Ben plays a central role in the maintenance of the wormhole. He is

[57] It should be noted, however, that the Siskos already break somewhat from this model in that the father is the single parent rather than the absent father.

selected by the alien race as an "emissary" between them and the inhabitants of Bajor and DS9. The aliens use Sisko's memories of and grief over his dead wife to make contact with him, taking the form of his wife and son. Their first contact with him is thus immediately tied to the figure of loss threatening the stability of the family unit and to Ben's continuing despair over the death of his wife that structure his character progression throughout the course of the series. The aliens, however, are initially unable to understand Sisko's grief. It is only after Sisko explains the concept of linear time to the aliens that they are (partially) able to grasp Sisko's temporal narrative journey.

The wormhole also, though, opens up the Sisko family to the threats of a hostile social reality. In the season 2 finale, "The Gem'hadar Part 1," which begins the Dominion arc that frames the remaining seasons, Ben is captured along with Jake on a trip to a planet in the Gamma quadrant. Ben imagines the trip initially as a father-son bonding journey, but this hope is quickly dashed when Jake invites his Ferengi friend Nog to come along, and Nog's uncle Quark also invites himself to join them. The insular journey of the mobile family here appears as an impossibility, an unfulfilled longing for a self-enclosed traditional family who can travel through space free of external incursion into the domestic space. Nog and Quark's unwanted intrusions also seem to foreshadow the dangers faced by the party in the Gamma quadrant. Quark and Sisko are captured and held prisoner by the Gem'hadar, a group of soldiers that work in the service of the Dominion. Jake and Nog are able to evade capture, and it is ultimately through Jake's efforts that his father and Quark are rescued (although this is later revealed to be a simulation). Here, while the hypermobility of the family can no longer be secured against

external threats, the bonds of family are rendered indispensable for fending off the dangers imminent in this new hypermobile world.

The important point here is that the perilousness of hypermobility is not seen as a reason for retreating into the domestic space and closing off the traditional family from the threatening external world. Rather, the family values of the domestic space are imagined as a source for social renewal when the boundary between public and private dissolves. Here again we find manifest the paradoxical figuration of the family in the political imaginary of neoconservatism. The security and stability of the normative family represented by Ben Sisko and his son cannot exist closed off from the perilous external world but must provide the moral impetus for the reterritorialization of the threats circulating in the social world. And, of course, it is technologies of hypermobility, and in particular the wormhole, that enable the cleansing force of the traditional family to render its effect on the external universe.

The Siskos' role in this emerging spatial production of the hypermobile family is perhaps best encapsulated by the season 3 episode, "Explorers." Here, after a trip to one of the main libraries on Bajor, Ben becomes enthralled by claims that Bajoran ships sailing on solar winds had traveled to Cardassia over 800 years ago and decides to recreate one of these ships and attempt the journey. Bajoran assertions about this ancient first contact are politically fraught, as they challenge Cardassia's narrative of Bajor as a primitive planet that legitimated its colonization of the Bajorans. The critique of colonialism here is quite evident, and the Cardassians throughout the series provide a useful projection of the dark underside of modernity as a colonizing and hyper-efficient military state. Ben's efforts to prove the viability of Bajoran claims are thus highly motivated by a need to de-legitimize Cardassian narratives of

superiority. Just as crucial is that Ben doesn't undertake the journey alone but is joined by his son, making it a family endeavor. The episode plays on a recurring motif of familial re-bonding as Ben sees the journey as an opportunity to strengthen the connection with his growing son. The interlinking of familial and political motivations investing the pair's journey provide a particularly explicit picture of the series' imagining of the hypermobile family as a force of positive political and social advancement. Mobility is of course central to the episode, as it is the conflicting claims concerning historical technologies of mobility and the mobility of the Siskos provided by the reconstructed ship that drive the narrative. As expected, the journey does provide for family bonding as Ben and Jake work together to overcome mechanical and navigational obstacles. The overlapping temporal frames of the episode are also significant in further articulating technologies of mobility to shifting modes of political hegemony. Just as the "traditional family" signified by the Siskos is not, or not simply, a historical return to the family of an earlier era but a drawing upon a particular historical imagining of the family to propel the hegemony of neoconservatism into an uncertain future, the central technology of mobility in the episode is a temporally ambivalent one, with its steampunk aesthetic – the ship's design is based largely on that of older sailboats combined with modern technologies – and use of a modern artificial gravity system (zero gravity makes Ben "queasy," he says).

Chief Miles O'Brien is also key to hypermobility in *DS9* as the station's chief engineer. It is up to him to ensure the technological mechanisms that enable mobility to and from the station, as well as on the station itself, are working properly. During the Dominion War, he is also in charge of ensuring the continued mobility of the *Defiant*, and he often becomes the hero when the ship's mobility is threatened in battle. Miles is also arguably the character in the

series most explicitly devoted to the prioritization of family. During the Dominion War, the series emphasizes this commitment through drawing attention to the messages he records before each mission for Keko and Molly in case he doesn't survive. Representative here also is the friendship Miles develops with Liam Bilby, a criminal in the Orion Syndicate, while working undercover in the operation for Starfleet Intelligence. Miles' devotion to Bilby is largely founded on Bilby's love of his family, whom he has moved off world for their safety. As he tells Miles, "family is the most important thing," a mantra which resonates with Miles' own devotion to family. Ultimately, Miles compromises his cover and jeopardizes his own safety to ensure the safety of Bilby's family. Despite Miles' unshakeable commitment to the bonds of the normative family, his own family nevertheless provides a representative image of the stresses rendered by the forces of hypermobility and late capitalist globalization on the family structure. Miles and Keko's relationship is fraught from the beginning of the series, strained by Keko's reluctant decision to quit her job as a botanist aboard the *Enterprise* and move with Miles to DS9. Keko provides a figuration of the claustrophobia and anxiety provoked by the new production of hypermobility represented by life on the station. She longs for her previously unfettered mobility aboard the *Enterprise*, while Miles welcomes the stability of a more stationary life. In a sense, this tension also echoes the conservative backlash against the perceived destructive effect of the women's movement on the stability of the traditional family. Having experienced the social and physical mobility afforded by a career in Starfleet and thereby access to the technological resources of hypermobility, Keko is unable to find fulfillment in a more traditionally gendered role as a housewife and mother. Thus, she personifies the transition

from the more utopian horizons of hypermobility in *TNG* to the more conservative vision of hypermobility in *DS9*.

Despite the restrictions of life on the station, Keko is initially able to find a sense of purpose through opening a school on the station. However, when families begin to move off the station amid building fears about the Dominion, Keko has to close down the school. Miles senses her sadness and seeks out a way to help give her a renewed sense of purpose. Finally, he reluctantly tells her about an opportunity to join a team surveying the mountains of Bajor, and Keko grasps the opportunity. The long stretches of time Keko spends away, though, further strain her and Miles' marriage. Here, it is the unity and stasis of the family aboard DS9 that illustrates the spatial configuration of threatened patriarchal authority that Miles represents. It is only after the survey ends and Keko returns to live on the station that the balance and stability of the O'Brien's relationship is restored.

Miles' close friendship with the station's medical officer Julian Bashir also presents a threat to the normative function of the family as it presents the opportunity for an elective form of kinship much in the same way the crew-as-family in *TNG* did. While Keiko never seems jealous of their relationship – to the contrary, she often encourages them to spend time together – Miles himself often experiences guilt when he spends more time with Bashir than with his family. In the episode "Extreme Measures", when it seems that Miles and Bashir may be facing death on a mission, Bashir attempts to get Miles to admit that he likes Bashir more than he likes his wife, to which Miles defensively responds that he loves Keiko. Bashir concedes that of course he loves her but that he likes Bashir more because they have more in common and have spent more time together. Bashir also confesses that he is in love with Ezri Dax but

that he still likes Miles more. Miles, though, never admits to liking Bashir more than his wife, and in the series finale chooses to return to Earth with his family, leaving Bashir noticeably depressed. Here, the bonds of friendship are ultimately conveyed as inferior to those of the biological family unit. Unlike in *TNG*, there is no sense here that a new family, defined by bonds of elective kinship instead of heterosexual and biological ties, might come to replace the "traditional" family.

The security of the O'Brien's normative family structure is also challenged by the complications in the birth of their second child. After Keko is injured, threatening the health of the fetus, Bashir transfers the fetus to the womb of Kira to save it. Following the transplant, due to the particularities of Bajoran physiology, Kira must continue to carry the child to term. Grateful for Kira's sacrifice, Keko and Miles treat her like a family member and invite her to move into their quarters. For a while, then, the trio functions as a kinship unit that exceeds the bounds of the monogamous biological family. There is even, in the episode "Looking for par'Mach in All the Wrong Places", an acknowledgement of shared attraction between Kira and Miles. This attraction, however, is viewed as a problem and the two agree not to pursue it in order to maintain the monogamous relationship between Miles and Keko. When the child is born, the family reverts to its normative structure, with Miles and Keko returning to earth with their children while Kira remains on DS9. In this situation, the child becomes once again a vehicle of temporal mobility via the intertwined functions of biological and social reproduction. As with Data in *TNG*, the O'Briens' child is a product of the merging of biological and technological processes of reproduction. The child only survives to be born because of the technological advancements that allow the fetus to be transplanted.

The arc of the series works towards the re-stabilization of both the O'Brien and Sisko families. However, while this re-stabilization is realized for the O'Briens as Miles and his family return to earth after the end of the Dominion war, it remains a utopian horizon for the Siskos. After keeping Gal Dukat from releasing the Pa Wraith, evil aliens trapped in the fire caves on Bajor, Sisko is taken to stay with the prophets, the aliens who created the wormhole, in the celestial temple (the wormhole) and tells his girlfriend Cassidy in a vision that he does not know when he will return. The closing shot of the series finale powerfully expresses this sense of the family as utopian horizon in its conjunction with hypermobility. Jake, accompanied by Kira, who has taken over command of the station, stares out a station window at the wormhole in which his father now lives in a timeless incorporeal form, as the camera slowly pans out to capture the station and the wormhole within the frame.

The Federation Family Against Neoconservatism

Given the series' privileging of a spatial logic endemic to neoconservatism, it is tempting to read *DS9*'s dominion war narrative as an uncritical affirmation of neoconservative ideology. However, things are more complicated than this. The ideology of the Federation – an ideology that privileges multilateralism and diplomacy over unilateral militarism – is, in fact, starkly opposed to the military interventionism and obsession with security of neoconservatism. Indeed, it is not the Federation but the Founders who most closely embody neoconservative ideology. The Founders justify their expansive military empire on the grounds that "solids" – their term for non-shapeshifters – are a threat to their existence and therefore they need to create a universe that is safe for their species. When Odo asks them why they need to impose

their will on others, one of the founders responds, “Because what you can control can’t hurt you. So many years ago we set ourselves the task of imposing order on a chaotic universe.” The Founders’ rationale here echoes quite closely neoconservatism’s aim to use military force to create a world safe for US values.

Also significant here is that *DS9* is more willing than *TNG* to critique the dark underside of the Federation’s utopian mission of peaceful exploration. The series frequently illuminates a tendency for utopian cosmopolitanism, predicated on a network of hypermobility technologies, to reverse into the reterritorializing operations of the security state. In these instances, the eventual resistance of the protagonists to these forces further sustains a critique, rather than embrace, of neoconservatism. In the two part season 4 episode, “Homefront/Paradise Lost,” for instance, a changeling bombing of a Federation/Romulan negotiation being held on earth instigates an attempt by Starfleet officials to implement security measures – including taking blood samples from Starfleet personnel and their families and deploying armed military personnel in civilian zones – that challenge the Federation’s commitment to democracy and civil liberties. It is significant here that the threat to earth from the Founders is a direct result of the opening of the wormhole, as Earth would otherwise be too far away from the changelings’ home planet to be in danger. Just as a shrinking hypermobile world produced by accelerating global flows prompted a retrenched obsession in the US with national security in the form of neoconservatism, the space-time compression produced by the wormhole in *DS9* leads to a similar transformation on Earth. Ben Sisko returns to Earth to assist Starfleet and his former commanding officer, Admiral Leyton, in finding ways to defend against the threat posed by the changelings. At first, he supports Leyton’s calls for increased security measures. After the

planetary power grid is shut off, leaving earth defenseless, in what is thought to be a dominion attack, Sisko helps Leyton convince Federation president Jaresh-Inyo to authorize the deployment of Starfleet personnel in civilian areas planet-wide. Sisko, however, becomes suspicious about the circumstances surrounding the attack on the power grid and uncovers that the attack was a plot by members of Starfleet, led by Leyton, to justify security measures and execute a military coup against the civilian government of the Federation. Leyton's defense of these actions resonate with neoconservative justifications of the security state and indeed seem quite prescient in relation to the discourse of the "war on terror" that would emerge several years later. Leyton insists that these measures are temporary and necessary to neutralize the Dominion threat and protect Earth. Moreover, he argues that "securing Earth is the first step to securing the Federation," echoing the neoconservative view that the security of the US is instrumental to the peace and prosperity of the rest of the world. As the representative of these views, however, Leyton is not cast as the hero but the villain of the episode. Instead, the hero is Sisko, who becomes the defender of the democratic ideals of the Federation as he fights against Leyton's plot by uncovering evidence of the plot and presenting it to the president, forcing Leyton's resignation. In a confrontation with Leyton, Sisko accuses him of trying to make the Federation a dictatorship: "What you're trying to do is seize control of Earth and place it under military rule…Overthrowing a legitimately elected government and giving Starfleet direct control over the government? Sounds like a dictatorship to me." The alignment of Leyton with the tenants of neoconservative ideology thus provides, on one level, a simple liberal refutation of neoconservatism as being fundamentally opposed to the more democratic ideals defended by Sisko. However, given how easily Sisko – and indeed the

Federation leadership and majority of the Earth population – is persuaded by the calls for an expanded security state, the episode can be understood as exceeding its surface liberal critique and working to illuminate the relationship between liberalism and neoconservativism not as one of diametrical opposition but as one between two different political manifestations of global capitalism, highlighting the tendency of the liberal democracy represented by the Federation to revert into an oppressive military state

Not unsurprisingly, the sub-plot of the two episodes centers on familial drama, focusing on Ben and his father Joe, who runs a restaurant in New Orleans on Earth. Joe Sisko becomes caught up in the conflict around the new security measures when he refuses, despite his son's pleading, to have his blood tested by Starfleet personnel and is arrested. While under arrest, Joe tells his son, "This business has you so screwed up, you're not thinking straight." The incident becomes a catalyst for Ben to begin questioning the actions of Starfleet. Later, it is only after a conversation with his father in which Ben asks for advice that he decides to stay and fight to expose Leyton's coup instead of returning to DS9. Thus, it is Ben's bonds with his family that provide him the courage to resist the emergent neoconservatism of the Federation. While *DS9* is largely unable to imagine kinship beyond the confines of the traditional family and thereby tends to legitimize neoconservatism's spatial imagining of the family in a hypermobile world, it nevertheless, in presenting the generative force of the Federation family as a weapon against authoritarianism and militarism – both in the form of the Dominion and the Federation – imagines the family as a locus of resistance to the militarism and authoritarianism of neoconservatism.

Conclusion

As I have argued in this chapter, the political and economic climate of the 90s in the US produced a tension-ridden and contradictory ideology framing new technologies of hypermobility within the hegemonic constructions of the mobile family and reproductive techno-futurism. In my reading of *TNG* and *DS9*, I have attempted to demonstrate how the tensions in this ideological formation were borne out within the narrative universe of each series. In these series, we can see how the *ST* universe's vision of a post-capitalist utopia enabled by advanced technologies of hypermobility remains underpinned by the ideological structures of Western capitalism, ideologies that legitimate a specific image of the hetero-patriarchal family as the rightful inheritor of the benefits of hypermobility technologies. Specifically, my reading of the series has tried to demonstrate how the threats posed to the normative family by technologies of hypermobility and the ideological ascendance of neoconservatism during the 90s structured the narrative universe of the *ST* franchise. While *TNG*'s more utopian vision opens up alternative configurations of the hypermobile family and reproductive techno-futurism, *DS9* provides a reterritorialization of the "postmodern family" that shares the spatial logic of neoconservatism while at the same time resisting its political logic.

Conclusion

Throughout this dissertation, I have explored the ways in which SFTV in the 90s negotiated the tensions of hypermobility as it became the dominant mode of mobility production – that is, the historically specific arrangement of material and discursive forces operating to enable and regulate the movement of information, people, and physical objects and to distribute access to the political-economic and technological means of mobility. This project has entailed following the intertwining stories of the development of new digital media technologies within the shifting political-economic conditions of late global capitalism and the imaginative representations of hypermobility in the worlds of 90s SFTV. In other words, I have undertaken an examination of the material and discursive production of hypermobility and the articulation of the two that constitute hypermobility as a mode of mobility production. In this pursuit, I have worked to illuminate the tensions and contradictions of hypermobility as well as the cultural anxieties it has provoked and the way in which these tensions and anxieties manifest themselves in the texts of the SFTV series I have analyzed. The imaginative worlds of SFTV, I have argued, provided a space for the negotiation of popular understandings of hypermobility as people struggled to make sense of technological and political-economic changes that altered the experience of space, time, and movement. Whatever insights these analyses give us into the emergence of hypermobility as a dominant mode of production during the 90s, such insights only take on a political significance and usefulness when they are brought into contact with the present historical moment. In the words of Walter Benjamin, the duty of

the historian working from the perspective of historical materialism is to record "the constellation which his own era has formed with a definite earlier one…establish[ing] a conception of the present as the 'time of the now' which is shot through with chips of Messianic time."[1] What constellation, then, can be conceptualized between the development of hypermobility in the 90s and the series of crises in hypermobility that have defined our own historical moment? And what role has the continued exploration of hypermobility in SFTV played within this constellation?

I have suggested that the events of September 11, 2001 represented a major crisis in the production of hypermobility. Here I want to briefly clarify what I mean by this and in what sense the events represented a crisis. In many ways, the response to 9/11 by the dominant political and economic interests in the US represented simply a continuation and intensification of a neoconservative security state that, as I note in my reading of *Stargate SG-1* in chapter 1, had already become hegemonic in the 90s. The expansion of the US military empire (and its legitimation as necessary for the assurance of national security), restrictive border security policies, and increased targeting of domestic religious and racial others that have come to define the war on terror all preceded the events of 9/11. In this sense, then, 9/11 did not represent any major shift in material conditions. However, it did represent an ideological crisis in which the tensions and contradictions of hypermobility came to an unprecedented head. As I have attempted to demonstrate throughout this dissertation, hypermobility was constituted by a contradiction between its deterritorializing and reterritorializing, or deboundarying and reboundarying, tendencies. One form this contradiction took was a tension between an

[1] Walter Benjamin, *Illuminations*, trans. Harry Zohn, ed. Hannah Arendt (New York: Schocken Books, 2007), 263.

ideological promise of free and democratic movement of information and people and a material configuration of power that operated to heavily restrict and control mobility in the interest of US and capitalist hegemony. In a sense, then, hypermobility has always been in crisis. What is significant about 9/11, however, is that it exposed these contradictions, exacerbating them to a point at which they could no longer be resolved within ideological claims to the promotion of free and open mobility. The regulation and control of hypermobility would instead come to be legitimated in the name of national security and safety.

In closing, I want to briefly consider how SFTV's imagining of hypermobility shifted following this crisis and how it has continued to develop at the current moment of crisis before developing some ideas about how the history I have sketched in this dissertation can animate an understanding of and political engagement in the current crisis of hypermobility.

Fraught Imaginings of Hypermobility in Crisis

Broadly speaking, explorations of hypermobility in post-9/11 SFTV moved away from the more utopian representations prevalent in the 90s. The open horizons of a liberating hypermobility in a series like *TNG* gave way to a more fraught imagining of hypermobility. This is not to say that utopian imaginings disappeared but rather that they were put into increasing tension with an imagining of hypermobility increasingly aware of its oppressive tendencies. Joss Whedon's *Firefly*, which debuted in the fall of 2002, roughly a year after 9/11, provides a representative example. In *Firefly*, hypermobility is dangerous and fraught for those on the outer rings of the new interplanetary society organized under the Alliance, the oppressive governing authority of a solar system colonized by humans in the future.

The narrative of *Firefly* focuses on the crew of the *Serenity*, captained by Malcolm "Mal" Reynolds, and their often illegal operations undertaken to survive on the outskirts of society. In the pilot episode, Doctor Simon Tam, who books passage on the *Serenity*, smuggles his sister, River Tam, onto the ship. The crew of the *Serenity* discover that River is a fugitive on the run from the Alliance but ultimately decide to allow Simon and River to join the crew and to protect them from the Alliance. Throughout the series, the *Serenity* must be perpetually mobile as the crew moves to avoid the panoptic gaze of the Alliance, who are in search of River. Mobility is thus a necessity undertaken for the purposes of survival. *Firefly*, through highlighting the barriers to mobility imposed on the crew of *Serenity* and those living on the border planets, exposes the dissonance between neoliberal globalization's promise of uninhibited movement for both goods and people and the restrictions on the movement of those on the margins of global society. But there is also a freedom the crew of the *Serenity* finds in this limited and fraught mobility. Indeed, Mal and his crew seem to find liberation in their nomadic existence on the run from the Alliance. In a flashback in the episode "Out of Gas," Mal shares with his friend and first officer Zoe his vision for their nomadic life aboard the ship with a "small crew, them as feel the need to be free. Take jobs as they come – and we'll never be under the heel of nobody ever again. No matter how long the arm of the Alliance might get…we'll just get us a little further." This is not to suggest a romanticizing of the crew's nomadic existence, however. The necessity of avoiding the grasp of the Alliance in order to maintain mobility often places the crew of Serenity in perilous situations, forcing them into Reaver[2] territory or leaving them at

[2] The Reavers are a group of cannibals that were the inadvertent product of an Alliance experiment intended to use chemical warfare to pacify the population.

the mercy of ruthless outlaws on the border planets. This is nowhere more evident than when Serenity breaks down on the outer reaches of the galaxy in "Out of Gas." As Wash, Serenity's pilot, points out, Mal's insistence that they stay off the grid has left them stranded far away from any ships that might receive their distress single. Thus, the barriers to the free movement of the *Serenity* ultimately threaten not only the crew's continued mobility but also their very lives. This perilous and restricted mobility—analogous to the dangerous journeys of undocumented immigrants across national borders—stands in sharp contrast to the free and uninhibited movement of goods throughout the universe. When, in "Ariel," the crew discusses a possible job in which they would steal medicine from an Alliance hospital, Kaylee, Serenity's mechanic, protests that the patients would need the medicine. Mal reassures her by pointing out that, since it's an Alliance hospital, the drugs would be replaced immediately. The barriers to the movement of Mal and his crew are thus opposed here to the instantaneous flow of goods across space through the Alliance-controlled distribution channels. In *Firefly*, then, hypermobility is both a source of oppression, producing a society of extreme inequality, and a mode of escape and freedom from this very oppression.

I have devoted much of my analysis in the preceding chapters to the *Star Trek* franchise, as in addition to being one of the most popular and expansive franchises of the 90s, it also consistently foregrounded hypermobility technologies and the social context in which they emerge. The *ST* series were also perhaps the most explicitly utopian in their representation of hypermobility. However, even the *ST* franchise's imagining of hypermobility took a notable turn following 9/11, developing the more tension-ridden imagining of hypermobility that we have seen in *DS9* to a much greater extent. *Star Trek: Enterprise* (*ST:E*), which premiered in

September of 2001, departs significantly in its imagining of hypermobility from the pre-2001 entries in the *ST* franchise in that mobility is presented in a much less utopian form and is articulated to the needs of a growing security state in response to new threats to earth. In *DS9*, we saw the exploration of the tension between Starfleet's guiding principles of peaceful exploration and pursuit of scientific knowledge and the increasing militarization of Starfleet in response to the threat of the Dominion. *ST:E* highlights this tension to a greater extent than *DS9* and does so in a way that situates it firmly in the context of the crisis 9/11 represented in the development of hypermobility. For most of the first two seasons of *ST:E*, it follows a familiar *ST* formula of the titular *Enterprise* exploring space and discovering new species. The mission of the *Enterprise* is enabled by a breakthrough in warp-travel technology allowing Federation ships to travel much greater distances into uncharted sections of the galaxy. In this sense, hypermobility continues to be a largely utopian form of mobility – enabled by new developments in mobility technologies – furthering scientific advancement and diplomatic relationships with alien species. However, in the final episode of season 2, which aired in May of 2003, earth suffers a devastating attack from aliens known as the Xindi, an attack which for the viewer recalls the recent memory of the 9/11 attacks. In the following season, the Enterprise embarks on a mission to reach the Xindi home world and launch a retaliatory attack. Here there is a sudden shift wherein hypermobility is no longer a means of exploration but is put directly in the service of a mobilized security state seeking to protect earth and defeat its enemies. This shift in *ST:E* brings to the fore the growing hegemony of neoconservatism following 9/11. More broadly, however, it recognizes the post-9/11 world as one in which the contradiction between the liberating and oppressive tendencies of hypermobility have become

heightened to an extent where utopian visions of hypermobility as a democratizing and egalitarian force are brought into direct conflict with the material realities of hypermobility as a force of increasing economic exploitation and nationalistic reterritorializations through the waging of war. Perversely, the militaristic endeavors of the *Enterprise* in the second half of the series represent another kind of triumphant hypermobility, one seemingly far removed from the utopian imperatives of peaceful discovery, as the development of new warp drive technology operates in the service of war, demonstrating that, to borrow from Caren Kaplan, "technologies of war may seem to be the epitome of the triumph of a world without boundaries or limits – where the subjects eliminate their objects without regret or the discomfort of embodied proximity."[3]

Running from 2004 to 2008, *Battlestar Galactica* provides another useful example of the shifting conceptualization of hypermobility in SFTV post-9/11. Hypermobility is foregrounded in *Battlestar Galactica*, but the mobility of the *Galactica* and its accompanying ships is not a utopian mobility aimed at exploration and knowledge but the forced mobility of migration. Like *ST:E*, *Battlestar Galactica* hinges on a devastating attack that also recalls cultural memories of 9/11. The cylons, a race of cyborgs originally created by the inhabitants of the seven colonies – the home worlds of the crew of the *Galactica* – but who rebelled against their masters and have had an uneasy truce with the humans, suddenly attack the colonies, obliterating them and forcing the remaining inhabitants to flee in search of a new home world. The primary technology of hypermobility in the series, ships with the capability of FTL travel, are put in the

[3] Caren Kaplan, "Mobility and War: The Cosmic view of US 'Air Power,'" *Environment and Planning A* 38 (2006): 397.

service of escaping from the pursuing cylons and finding an inhabitable world where humans can live safe from the cylons. Thus, while there is on one hand a sense of hypermobility as freeing in that it might allow the humans to found a new peaceful world, the mobility of the humans through space is fraught and perilous and is constantly endangered by the actions of the cylons as well as enemies from within the crew. Equally importantly, this mobility is not freely chosen but is enforced by the conditions. While the displacement of refugees dramatized in the series is not in and of itself indicative of the conditions of hypermobility, the fact that this displacement occurs following a war in an interplanetary society – a war, nonetheless, between cyber technology and humanity – enabled by FTL travel and that the capacity for FTL travel provides the humans their only means of escape from the cylons on their journey, speak to the realities of displacement in a hypermobile world. Like *ST:E*, then, *Battlestar Galactica* highlights tensions between previous utopian imaginings of hypermobility and a world in which hypermobility has contributed to increasing danger and geopolitical conflict.

Most recently, *The Expanse*, which premiered in 2015, provides an interesting exploration of hypermobility at the current moment of crisis. Whereas utopian imaginings of hypermobility continued to profligate in the SFTV of the first decade of the 2000s despite increasingly coming into conflict with decidedly more dystopian tendencies, utopian images of hypermobility are almost completely absent from *The Expanse*. In the universe of *The Expanse*, in which new forms of high-speed space travel have allowed humanity to colonize the solar system, the products of hypermobility are found mainly in intensifying class and geopolitical conflict. Unlike the SFTV of the 90s and even much of the early 2000s, *The Expanse* explicitly foregrounds class conflict. The manual labor of the "belters" necessary to maintain networks of

transportation and communication is rendered hyper-visible as are the political conflicts arising from the different class interests. It is also interesting to note that the unlike the expansive galaxy-wide spaces traversed in much 90s SFTV, the geographical network of *The Expanse* is limited to the solar system. Moreover, the space beyond the solar system is imagined not as a promising frontier but rather as a space of danger. The main narrative of the series resolves around the introduction of a "protovirus," a dangerous and seemingly intelligent alien virus that invades from beyond the solar system. Thus, rather than a utopian frontier of exploration, the frontier of *The Expanse* is one of viral threat, manifesting a sense of anxiety and claustrophobia produced by the accelerating space-time compression of late global capitalism. The focus on viral threats here also serves to link questions of large-scale mobility between planets and molecular scale mobility within discourses and practices of securing the nation-state and the proliferation of transnational capital. As Melissa White argues, "Viruses, especially those that move across species boundaries, insistently reveal the fundamental interdependency and vulnerability of all lives and thus illuminate the very conditions upon which (affective) politics unfold today. Their crossings, and governmental responses to their crossings, therefore have much to tell us about the contemporary role of the nation-state in the multiplication of capital."[4] As the discovery of the protovirus in *The Expanse* spurs government panics among the leaders of Earth, Mars, and the belters, it also serves the interests of trans-global business interests seeking to exploit the possibilities of the virus for profit. Thus, the multi-scalar mobility illuminated through viral proliferation speaks to the complicated dialectic of national

[4] Melissa Autumn White, "Viral/Species/Crossing: Border Panics and Zoonotic Vulnerabilities," *Women's Studies Quarterly* 40, nos. 1-2 (2012): 118.

reterritorializations and capitalist deterritorializations constituting hypermobility at the present moment.

The Expanse's envisioning of hypermobility is thus one particularly suited for the current historical moment in which hypermobility has reached an unprecedented state of crisis with the continuing acceleration of electronic and physical mobility coming into conflict with a resurgence of right-wing forces in the US and Europe reacting against the threats they see hypermobility as posing to particular racial and national interests. So, what can we say about this current moment of crisis, and what does the history I have sketched in this dissertation have to offer for an understanding of this current moment?

A "Struggle for the Repressed Past" in a Moment of Crisis

If the events of September 11th and the ensuing "war on terror" represent a major crisis in the development of hypermobility, I would suggest that the current moment, in which the rise of right-wing forces across the West have mobilized a reaction to the accelerating mobility of information and physical bodies, represents another major crisis. In the US, the arrival of this crisis has been marked by the election of Donald Trump. Trump, who campaigned on building a wall between the US and Mexico, deporting Mexican immigrants, and banning refugees and immigrants from Muslim-majority countries, represented the emergence of a new ideological configuration that has come to be termed the "alt-right" and one that departs significantly from the neoliberal-neoconservative consensus that had dominated Washington leadership from the Reagan years through the Obama presidency. If the marriage of neoliberalism and

neoconservatism served to mollify the contradictions of late capitalism in the US, the election of Trump signified a breakdown in this ideological configuration.

In addition to seeing the resurgence of right-wing forces in the US and Europe as a product of a crisis in late capitalism and neoliberalism, this crisis can also be understood specifically as a crisis of hypermobility. The alt-right and pseudo-fascist organizations have particularly coalesced over issues of immigration. These forces thus seem to represent a reaction against the (often forced) mobility of those who relocate to the West from the global south due to economic conditions or political instability. On one hand, the support for these movements come from those who have benefitted from the global production of hypermobility but see a threat from the mobile bodies this system has produced. The hypermobility of info-capital has enabled an intensifying accumulation of wealth for capitalist interests in the US while at the same time the mobility of non-white bodies has threatened the hegemony of whiteness crucial to the perpetuation of these same interests. And on the other, support comes from those in the West who have been victims of capitalist hypermobility as companies have relocated to areas in the global South with cheaper labor costs. Trump, who comes from the former group, embodies many of the contradictions that have produced this crisis in hypermobility. The fact that Trump's wealth has stemmed from a transnational real estate empire enabled by the hypermobile flow of capital and yet he has stoked a politics of resentment against the flow of physical bodies enabled by these same forces is not a mere irony but an encapsulation of the contradictions of hypermobility. While global capital requires the mobility of labor to maximize its exploitation, this mobility presents a threat to the ruling class's control over the production of mobility.

Given these present conditions in which the tensions of hypermobility have heightened to a point of producing a crisis in the dominant ideological consensus and giving rise to a dangerous right-wing movement, it is important to consider what the political stakes are of doing a history of hypermobility in the 90s from the vantage point of the present. What is gained by constructing a history of the development of hypermobility and its role in the progression of late global capitalism is perhaps best expressed by Walter Benjamin in his writing on the role of the materialist historian at an earlier moment of crisis in which the forces of fascism were on the rise in Europe. Benjamin argues that "[t]he tradition of the oppressed teaches us that the 'state of emergency' in which we live is not the exception but the rule. We must attain to a conception of history that is in keeping with this insight. Then we shall clearly realize that it is our task to bring about a real state of emergency, and this will improve our position in the struggle against fascism."[5] Recognizing the "state of emergency" as the rule entails understanding the present not as an aberration but as a crisis whose existence becomes recognizable in the rubble of the past. Thus, for Benjamin, the historical materialist must begin from this insight, dispensing with "[t]he amazement that the things we are experiencing are 'still' possible in the twentieth century"[6] and thus "stop telling the sequence of events like the beads of a rosary…[but instead] grasp[ing] the constellation which his own era has formed with a definite earlier one."[7] Such a project entails for Benjamin however not only a recognition of the crisis of the present in the constellation of past and present, but also a revolutionary potentiality that emerges from this constellation. "The past," he reminds us, "carries with it a

[5] Benjamin, 257.
[6] Ibid.
[7] Ibid., 263.

temporal index by which it is referred to redemption."[8] The historian who encounters this past in a constellation with the present encounters "a revolutionary chance in the fight for the oppressed past" perceived "in order to blast a specific era out of the homogenous course of history."[9] There is thus what Benjamin refers to as a "weak messianic power" which emerges out of the collision of past and present or what we might recognize as a weak utopianism that animates the work of the historian.

We can take two particular insights from Benjamin's remarks here relevant to the project I have undertaken here and, more broadly, for the task of producing histories of the recent past. I should note here that while Benjamin's interests are in historical moments further removed from the present of his writing,[10] my own work is focused on a much more recent history. Nevertheless, Benjamin's insights are, I would suggest, equally useful for histories of a more recent past, as they provide a historical method attuned to uncovering the persistent crises that link past and present. First, Just as Benjamin suggests concerning the response of the historical materialist to the rise of fascism, I would argue that in order to respond to the resurgence of right-wing forces that marks our present crisis, we must recognize the rule of our present "state of emergency" in the earlier historical moment that has been the focus of this dissertation. At the current moment of crisis in which fascism has re-emerged as a threat, it is important to look at the historical development of hypermobility not in terms of a movement of progress that has now been halted but to see in this history the very conditions of the current

[8] Ibid., 254.
[9] Ibid., 262.
[10] The most notable example of Benjamin's historical work undertaken within this approach is his unfinished Arcades Project, which takes as its focus a historical moment removed by almost a century. Walter Benjamin, *The Arcades Project*, trans. Howard Eiland and Kevin McLaughlin (Cambridge, MA and London: The Belknap Press, 1999).

crisis. By recognizing the inherent contradictions and tensions of hypermobility as it came to become the dominant mode of mobility production, we are better armed to respond to its current moment of crisis and to potentially seize upon this moment to introduce "a real state of emergency." In sketching this history in this dissertation, I hope to have made some progress towards illuminating the current crisis of hypermobility, explicating the conditions that have led to this crisis.

A second and equally crucial insight gained from Benjamin here is that we should recognize the flashes of revolutionary potentiality that arise in the historical constellation of the present and past. In this regard, I would suggest that there is a potential to seize on the utopian openings of hypermobility in the 90s to exploit the current moment of crisis to work towards a democratic and socialist form of hypermobility that might develop new digital media technologies and re-appropriate existing technologies for use outside the social conditions of late capitalism. While the more utopian moments of 90s SFTV were often predicated on an elision of the concrete political situation of the world out of which they emerged, these moments nevertheless manifest a desire for a world beyond the constraints of late capitalism. At the same time we recognize the oppression and distress brought by hypermobility in the 90s, we should also recognize and seize upon the moments that point in a different direction, towards an alternative future. That these utopian potentialities seem to be disappearing from contemporary SFTV might propel us to seize on both the more complex critiques of a hypermobile world offered by contemporary SFTV and the utopian moments of the SFTV of an earlier era. Like theory, SF can offer an estranged image of our contemporary world and the historical processes that have produced it. This is not to suggest in any way that SFTV can or will

save us from the oppressive tendencies of hypermobile late capitalism, particularly as it is necessarily constrained (though not determined) by the capitalist relations of production and distribution out of which it emerges. Rather, I want to propose that a conceptualization of hypermobility informed by a critical reading of the SFTV of the 90s and the present moment can help to produce an understanding of the complexities of the historical development of hypermobility, an understanding necessary to productively engage in a struggle against the right-wing forces that have emerged as a result of the internal contradictions of hypermobility and the imagining of less oppressive futures in which technologies and apparatuses of hypermobility serve democratization and liberation.

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