

## Introduction

A “whole-earth” discourse stresses the globe’s organic unity by considering matters of life, dwelling, and rootedness. It emphasizes the fragility and vulnerability of a corporeal earth and advocates responsibility for its care. It can generate apocalyptic anxiety about the end of life on this planet or warm sentiments of association, community, and attachment. Such a discourse has to confront the globe’s islandness in the oxymoron of global localism. A “one-world” discourse, by contrast, concentrates on the global surface of the earth, and on circulation, connectivity, and communication. It is a universalist, progressive, and mobile discourse in which the image of the globe signifies the potential, if not the actual, equality of all locations networked across frictionless space. Commonly associated with technological advance, a one-world discourse yields an implicitly imperial spatiality, connecting the ends of the earth to privileged hubs and centers of control (Cosgrove, 2001).<sup>1</sup>

Although the American frontier was declared “closed” by the U.S. Census over a century ago in 1890, in many respects it remains startlingly “open”—the frontier plays a vital and constitutive role in 21<sup>st</sup> century geopolitical and cultural discourse. From the exportation of the United States’ War on Terror to the emergence of a global (and trans-global) information and communication technology infrastructure, the frontier—the dynamic divide between known and unknown, civilized and barbaric, or good and evil—continues to figure meaningfully as a globalizing space in which ideological and material terrains unite (Walker, 2001). As well, there is a continuing reliance upon the discursive metaphor of “progress,” particularly American progress, which refers directly to projects of territorial expansion and control that claim legitimacy in the name of freedom and peace across the earth. Thus, the contemporary, globalizing *Pax Americana* is, in part, a social construction involving the interpretive categories and propagandistic language of the frontier as it is imagined and projected onto imperial and organic spaces. In other words, a frontier imaginary that involves ideological, poetic or tropic, and material dimensions is at work in contemporary globalization.<sup>2</sup>

Insights concerning the endurance of the frontier imaginary and its connection to globalization provide for a better understanding of how George W. Bush, the son of a former American president and CIA Director and a wealthy, international business tycoon prior to being named Chief of State by the Supreme Court and rigged e-vote machines (Kellner, 2005), has cemented his role as the leader of an ongoing War on Terror by casting himself as a populist Texan of the Old West (Faludi, 2003). Bush’s use of American frontier parlance (his talk of

“smoking terrorists out of their holes” in Afghanistan, of “bringing them in dead or alive,” or his tough-talking “48 hours” to get out of Dodge speech issued to Saddam Hussein)—all directed via prime-time media to a global audience—can be best analyzed as a Bush administration attempt to re-cast the President, a knowing corporate imperialist, as a simple, honest son of the Southwest. In this attempt, we can clearly perceive that current discursive terrains are structured by a problematic fusion of one-world universalism and whole-earth rootedness.

The rise of the Internet—a vast system of planetary telecommunications, electrical networks, peripheral industries, international mining and shipping businesses, and post-planetary satellite operations—owes much to the progressive post-World War II rise of American techno-science and its integration into the world economy (Best & Kellner, 2001), and is thus both a global and regional production.<sup>3</sup> As such, it too often evokes connotations of whole-earth and one-world discourse. On one hand, through utopian terminology like “global village,” Internet discourse conceives of Internet users as dwellers in a planetary community that affords the greater association needed to overcome the apocalyptic challenges that threaten life in the future. On the other hand, the Internet, when wrapped in a rhetoric of novelty and ongoing one-world development, is clearly imperial as it creates “digital divides” between the haves and have-nots, between those who are networked and those who are not. These divides imply a frontier zone in which “otherness” retreats before an irrepressible line of “developing progress.” Thus, as a contemporary manifestation of American culture, the Internet invokes and produces the frontier imaginary along both global and local lines.

The root metaphor of progress at work in the machination of American geopolitical hegemony, as well as the frontier imaginary that clothes and informs it, are historical myths that can be traced to the legacy and work of Frederick Jackson Turner (1920, 1972). Turner’s idea that the United States’ Westward-expansion constructed a dynamic frontier that worked to evolve the citizenry, the culture, and the very democracy of the country, also articulated an imperialist vision of history, even as it sought to legitimate the rise of 20<sup>th</sup> century American science and industry as the true heirs of frontier Americanism. Of course, there are degrees of truth to the Turner thesis; the move Westward no doubt developed modern America in important ways by providing natural resources, military security, new socio-cultural spaces, and future possibilities for development. But Turner’s particular emphasis upon progress, conflated with territorial expansion, cultural evolution, and democracy, served to construct (or transform) the frontier imaginary more significantly than the frontier he claimed to objectively describe. The new global American frontier, then, has less to do with any particular cattle puncher or alfalfa grower living west of the Missouri River than it does with

Turner's revisionist imagining of the same, and the continued re-imagining of Turner's claim in the name of a continuing American progressive interest.

In this paper, I attempt to practice a form of what Best and Kellner (2001) term "transdisciplinary cultural studies" (p. 11) in order to link elements of a critical theory of society for the present age and encompass insights from geography, rhetoric, political science, science and technology studies, philosophy, and other disciplines. In particular, I develop an historical analysis, a genealogy of contemporary technological forces, that seeks to chart the relationship between past events and discourse, as well as present transformations in subjectivity, politics, and society as a whole. By utilizing a method Kellner (1995) has termed "diagnostic critique," this paper "uses history to read texts and texts to read history," in order to grasp contemporary "utopian yearnings" about the future of the Internet and global society so that progressives will be challenged "to develop representations, political alternatives, and practices and movements which address these predispositions" (pp. 116-17).

Specifically, I connect the Turner thesis and the construction of a frontier imaginary, to contemporary American practices as evidenced by the exportation of advanced Western science and technologies throughout the globe, using the Internet as a representative example. I underline "Western" here to point out that such technologies are inextricably, historically, and culturally Western. Thus, following Cosgrove (2001), this paper suggests that while the construction of a planetary communications network might indeed point to the fulfillment of a political ideal in which rhizomes of co-construction come to displace the center/periphery strategies of empire,<sup>4</sup> the Internet needs to be analyzed as more complex. Emerging from empire, and furthering its own case as a colonizing technology (Bowers, 2000), the Internet still appears to have centers and peripheries. That the dissemination of this Western cultural product to southern and eastern cultures is now a major global strategy by international development planners, and that this dissemination occurs via the language and conceptual strokes of the "American West," points to the fact that Al Gore's Global Information Infrastructure—"a metaphor for democracy itself" (Gore, 1994)—is also the metaphoric evocation of Turner's democracy and thus imperial progressivism. However, rather than assuming that the Internet is merely an imperial technology, this paper also concludes that the "Western" directionality of one-world imperialism is now extending itself over the whole-earth—in every direction—in the name of a pervading global localism.

### **Turner's Grand Production: American Progressivism as Westward Ho!**

It is almost impossible to understand the current geopolitical manifestations surrounding information and communication technologies (ICTs), the way in which they are radically crossing boundaries and erecting new ones without direct reference to Frederick Jackson Turner's *Significance of the Frontier in American History*. Turner did not invent "the frontier" for Americans in this 1893 essay. Rather, in his writing for popular publications, he quite consciously drew upon a wealth of American cultural myths about the West that already existed in trade magazine tall tales, pictures and paintings, penny novels, oral narratives, and newspaper accounts. In fact, from the Jeffersonian purchase of the Louisiana Territory to the U.S.-Mexico War, and from the Homestead Act to the California Gold Rush, Americans had been moving and thinking westward for almost a century by the time Turner published his essay in 1893. Yet, if Turner did not create the symbolic capital of the American frontier, he legitimated it and re-imagined it *en toto*, by giving it the profound spin of being a space involved in the historical science of American progressivism and exceptionalism.

In Turner's hands, the story of American progress is told in quasi-Hegelian terms:

American development has exhibited not merely advance along a single line, but a return to primitive conditions on a continually advancing frontier line, and a new development for that area. American social development has been continually beginning over again on the frontier. This perennial rebirth, this fluidity of American life, this expansion westward with its new opportunities, its continuous touch with the simplicity of primitive society, furnish the forces dominating American character. The true point of view in the history of this nation is not the Atlantic coast, it is the Great West (1972, p. 4).

For Turner, European colonists crossed the Atlantic (itself a sort of frontier) to heroically settle the New World of the eastern seaboard. There they encountered the "savageries" of the wilderness and the Indians, upon whom the colonists were initially forced to rely for their very survival. Yet the story of frontier progress was the colonists' increasing transformation of their savage state into a reproduction of their past European civilization along entirely American lines. In short, Turner's frontier thesis is a master/slave dialectic reformulated in geographical terms: the wilderness masters the colonist, the colonist masters the wilderness, and this leads to a continuation of the westward push towards a liberty

and self-determination that occurs further and further away from its original European roots.

In a very Hegelian sense, American frontier history was developmental for Turner, and he found it possible to be able to analyze this history according to stages. The frontier, then, can be more properly understood as a series of frontiers. Initially, Turner imagined that the frontier was constituted by the fur trade in which prospectors and companies in the wilderness transformed the pelts of fur-bearing animals into commodities. As animal populations declined, traders moved westward in search of more product, and ranchers and miners moved in to take the traders' place. Finally, when natural resources had been sufficiently drained—when the cattle needed to be herded onward and when the cries of “Gold in d'em d'ere hills!” rolled across the Great Plains—agricultural families filled the gap left by migrating ranchers on the frontier's tail end (p. 10).

But Turner was also seeking to say something about American democracy and about how a distinctly American people—characterized by their hardiness, ingenuity, and liberal political attitude—emerged from the common experiences that they shared as western prospectors (Hacker, 1972). For Turner, the frontier allowed for the ultimate construction of a sectionalized nation, in which America's bioregions (for lack of a better term) would evolve internally, but where government (either national or state) would be allowed to stand as the federation of these various frontier interests and historical actualities.

Still, with the closing of the frontier at the end of the 19<sup>th</sup> century—the rural frontier was considered to be the last of the great frontiers—and the mass-establishment of America as an agricultural power, it might be hard to understand how Turner could draw upon frontier history to legitimate the coming urbanism of the 20<sup>th</sup> century as the child of American frontier democracy. In this, Walter Prescott Webb, Turner's student, helps immensely. For if Turner concretely memorializes the growth of the nation as the progressive move westward to colonize the free, arable lands available there, Webb importantly underlines the role of modern technology in the Turnerian process. Lurking as the *telos* in Turner's vision (a vision often merely regarded as that of the renegade and ingenious pioneer), is the progressive history of American science and technology. For as Webb (1931) states, “New inventions and discoveries had to be made before the pioneer farmer could go into the Great Plains and establish himself there” (p. 205).

Webb is particularly interested in examining the role of technology vis-à-vis the rise of national farming. To this end he names six technologies that were central in managing the environment of the Great Plains: the Colt six-shooter, barbed wire, the windmill, the John Deere plow, the transcontinental railroad, and mechanized tractors and harvesters. Without these, Webb contends, the arid and inhospitable Western wilderness could never have been sufficiently transformed

so as to allow for the passing of the progressive frontier. We might also go on to conclude that without these and other such technologies the American West never could have been successfully trapped, ranched, or mined. Indeed, the entire growth of the American continent seems founded upon a process of technological urbanization in which subsistence-oriented homesteading was replaced by capitalist ranching and large-scale agribusiness (Merchant, 2002).

Many of Turner's critics emphasize his reliance upon a simplistic model of development in which European colonists are first enslaved to the savage wild, which is then itself mastered by the colonists as they learn to control the land on their own self-determined terms. While the image of civilized frontiers heading westward may have played nicely to a popular audience at the end of the 19<sup>th</sup> century, it is clearly false history. On the one hand, if Turner mentions the influence of French and other traders upon the frontier, he de-emphasizes the American frontier with Canada and hence the flow of people who migrated up and down the Mississippi and Missouri rivers. On the other hand, however, if American Indians are treated callously within Turner's narrative, many other nationalities and ethnicities are never mentioned at all! Completely missing are the northern migrations by both Spanish and mestizo populations into the American southwest from Mexico. The role of African-Americans via the narrative of the slave trade, and in their own northern and western migrations, are also absent. Turner also ignores the important eastward flow of peoples from China, Japan and other Asian nations into the American West during the 19<sup>th</sup> century, without whom many of Turner's own progressively American achievements may not have occurred (Nash, 1993). Turner's inability to account for these peoples in his famous thesis, and his equivocation of a pan-continental existence of vastly different American Indian tribal cultures with a mono-(non)culture of "savagery-deserving-of-mastery," clearly makes his an imperial account of the American Frontier.<sup>5</sup>

Thus, while Turner's thesis may be a more advanced reworking of the imperial center-periphery model of development—in Turner's America there is no clear center because it is everywhere, surrounded by receding peripheries—it maintains all of the problematical socio-political baggage of that model. In other words, behind Turner's progressive narrative is a darker, suppressed account that has been linked to the legacy of conquest and real estate (Limerick, 1987). Concurrent to this legacy, I have suggested, is also the legacy of science and technology as it furthered urbanization and capitalization processes in 19<sup>th</sup> century America. This will be important to remember as we seek to understand the link between Frederick Jackson Turner and the proliferation of global information and communication technologies.

### **Towards the New Frontier: American Progressivism as Cold War Science**

Frederick Jackson Turner was not directly responsible for the characters and aesthetic of the frontier in the popular imagination of Americans in the 20<sup>th</sup> century. Without a Frederick Jackson Turner there still would have been a Kit Carson, Wild Bill Hickock and Buffalo Bill Cody. Without Turner there still would have been cowboy and Indian stories and their related toys and paraphernalia. Nor did it take Turner to give us the material (or even the themes) of the enduring Hollywood Western. But what Turner may have given to the modernizing country was a quotable imaginary space—one that referenced and housed these various characters and motifs—that could be drawn upon to further the American spirit, mostly via the growth of the science and technology industries. Again, this was not a historical accident, but was in actuality a final aspect of Turner's own project: What was to be America's destiny now that its western-most border was manifestly ended at the Pacific Ocean? Could a case be made that the process of the American frontier could sublimate its own history of material expansion and move in a new direction or another dimension?

The use of frontier language and the way in which science and technology are imagined to be the American *telos* of such language is nowhere better illustrated than in the famous communication between President Franklin D. Roosevelt and Dr. Vannevar Bush, director of the Office of Scientific Research and Development during World War II. Dr. Bush is the leader of a top-secret experimental team that is charged with coordinating scientific research and applying it tangibly on the war front. But the war is coming to a close, and Roosevelt's mind is turning towards times of peace. In a letter to Bush, dated November 17, 1944, Roosevelt clearly articulates what he is after. How can the new scientific and technological advances made during the war be applied civically, he wonders? What role should or must the government play in releasing this information and regulating it? And how can scientific talent be developed in American youth so that the growth of American science and technology can be assured for the future?<sup>6</sup> Roosevelt culminates his letter with a futurist statement that manages to use Turneresque ideology to conflate senses of Americanism, techno-science, capitalism, and war might: "New frontiers of the mind are before us, and if they are pioneered with the same vision, boldness, and drive with which we have waged this war we can create a fuller and more fruitful employment and a fuller and more fruitful life" (1944).

In his reply, entitled *Science, The Endless Frontier*, Dr. Bush directly takes up Roosevelt's thrust and parrots it back to him in the form of a thirty-page answer declaring his complete agreement with the President that scientific progress is *the essential post-War American project*. At the conclusion of his report to the President, Bush echoes Roosevelt's Turnerism with a bit of his own:

The pioneer spirit is still vigorous within this nation. Science offers a largely unexplored hinterland for the pioneer who has the tools for his task. The rewards of such exploration both for the Nation and the individual are great. Scientific progress is one essential key to our security as a nation, to our better health, to more jobs, to a higher standard of living, and to our cultural progress (1945b).

Turner's frontier is thus happily transformed into a sort of imaginary space in which the coming Cold War America can assert its own imperial claims, continue its development, and ensure its future security. In this way, the Roosevelt-Bush correspondence is key to understanding how modern American imperialism, the rise of post-World War II science and technology, and frontier parlance were co-constructed. What is important to recognize, in particular, is the central role of the government in planning and promoting this strategy. It is also important to note the fascinating way in which these men speak Turner's ideas as a sort of code for how the modern military scientific and industrial complex can be privatized, developed, and used for nationalist aims.

One of the military projects of the new science that Vannevar Bush directly oversaw was the creation of the Atomic bombs that were dropped on Hiroshima and Nagasaki during the war's end. Bush was himself a major booster for both the new weapon and the technology behind it, and there can be little doubt that he is thinking directly of such science when writing to Roosevelt in 1945, even though he mentions advances in medicine and related humanitarian progresses. But what are we to make of the conflation of American exceptionalism and democracy, Turner's frontier, and atomic weaponry? The answer lies in the fact that the frontier imaginary is not merely a disembodied metaphor, but is rather a semiotic complex that involves a form of aggressive imperialism in both its material and ideological dimensions.<sup>7</sup>

If this were the only connection between Frederick Jackson Turner and Dr. Vannevar Bush, or between the frontiers of the 19<sup>th</sup> and 20<sup>th</sup> centuries, it would be meaningful and important. But the frontier imaginary that binds the two men continues its legacy into the present. Bush's involvement with advanced science and technology and his commitment to the various aspects of the Turner thesis led him to chart America's greatness through scientific progress, much as Turner equated democracy and progress with the expansion of the geographic frontier (Klitzmann, 2001).

In 1945, Bush wrote a popular essay for *The Atlantic Monthly* titled "As We May Think." In this piece, Bush displays a virtuosity for cataloguing the then present day advances in the science and technology sectors and in utilizing his inside information about their potentials to describe a futuristic, fairy tale America in which everyone's needs will be either eased or eradicated.<sup>8</sup> Most importantly

for our purposes, however, Bush describes in this essay the “Memex,” an early pre-figuring of the World Wide Web:

Consider a future device for individual use, which is a sort of mechanized private file and library. It needs a name, and to coin one at random, "memex" will do. A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory. It consists of a desk, and while it can presumably be operated from a distance, it is primarily the piece of furniture at which he works. On the top are slanting translucent screens, on which material can be projected for convenient reading. There is a keyboard, and sets of buttons and levers. Otherwise it looks like an ordinary desk (Bush, 1945a).

Such visionary forward thinking may seem very impressive, but it must be remembered that the man uttering the preceding premonition was in a position to make such a dream into a reality. Bush was directly responsible for linking American university research with project-hungry U.S. military capital, a relationship formalized a decade later by President Eisenhower when he formed the Advanced Research Projects Agency (ARPA). ARPA was created in 1958 because of the fear that Soviet atomic weapons could shatter the American communications infrastructure. Developed by researchers in American universities, the government, and the U.S. military, the ARPANET was finally developed in the late 1960s; and so the foundation for the Internet—prefigured by Bush two decades earlier—had arrived.

Having passed through Vannevar Bush’s hands, then, Turner’s frontier transformed in the direction of John F. Kennedy’s New Frontier of high-technological liberalism.<sup>9</sup> For Kennedy, Cold War America confronted “the frontier of unfulfilled hopes and dreams,” beyond which lay “the uncharted areas of science and space, unsolved problems of peace and war, unconquered pockets of ignorance and prejudice, unanswered questions of poverty and surplus” (Kennedy, 1960). Facing west as he accepted the nomination for President, he invoked Turner’s spirit to narrate his call for a society driven by boundless opportunities, vigorous growth, and the courage to solve problems no matter how large. In particular, conquest of outer space, the “final frontier” as Kennedy sometimes spoke of it, became a central metaphor for his Turnerism. For instance, Kennedy considered the technological achievement of donning the moon with the American flag as a priceless manifest destiny for the nation of “freedom and peace” (Kennedy, 1962).<sup>10</sup> Therefore, equal parts imaginary American frontier space and real international and outer space, as the frontier imaginary entered into the age of the dawning Internet imaginary, advanced science and technology,

fervent nationalism, and imperialism were all woven into cultural and political narratives that were, in some sense, a thematic homage to Turner's 19<sup>th</sup> century ideology of westward progress (Jordan, 2003).

Yet if Kennedy developed a one-world discourse through his project of winning the Cold War and creating a singular democratic world under the aegis of America, he also produced the beginnings of contemporary whole-earth discourse. The photograph of the ball of blue earth that came to represent the burgeoning environmental movement as the symbol of the first Earth Day was itself a product of Kennedy's moon program (Cosgrove, 2001), and the humanitarian social focus of so much of his New Frontier agenda responded to new values and concerns that dictated the "whole earth" was humanity's to dwell in and care for. We cannot think about Kennedy, in this context, without thinking about Vannevar Bush and Frederick Jackson Turner, as the ideological role of the American frontier runs a common course through all three men's visions. But the historical mixture of one-world and whole-earth discourse largely emerged in Kennedy's age and is itself a product of the New Frontier. Accepting this, we still have to see the ways in which the construction of a contemporary Internet imaginary has been produced as the extrapolation of this process, even as we wonder about the possibility of the end of frontier ideology in favor of a more politically palatable alternative.

### **The Electric Frontier: Virtual Independence or Virtually Dependent?**

As I noted previously, the growth of America's information and communication technology infrastructure over the last half-century cannot be separated from the growth of America as a world hegemonic force. Both were experiments launched and conducted by a small circle of initiates in the government, military, and corporate sectors—those who dreamed of deep space missiles and their defense, of harnessing the power in the stars, and of building a new nation around an economy that could be managed to produce such visions without compromising the manager's larger imperial objectives. If Turner's frontier imagined democracy and liberty as pointing westward, the New Frontier of the Cold War took the westward imagination and pointed it inward towards the conscience, and outwards towards the sky and the whole-earth. A sort of political alchemy, "Americanization" was now formulating a *modus operandi* for global economic leadership through the production of stalwart citizens for whom individuality was realized—not by being recognized by their government, but in recognizing their government—as part of their each being asked what he or she could do for the challenged country.

Of course, according to an underlying motive of this plan, what one could do for one's country is to become a sort of homesteader within the emerging global economy, producing and consuming the goods of the modern urban marketplace like the pioneers of old, with all the faith and practice of the greatest *carpe diem* ever known. Having taken up this call, America has become increasingly wealthy and powerful over the last 30 years, while subduing the wilderness in ways unthinkable even to the most renegade of clear-cutting, 19<sup>th</sup> century pastoralists. Indeed, vast amounts of natural resources have been culled and/or wasted in the name of the contemporary American dream, radically altering rural and urban geographic landscapes throughout America and the world. Further, via the hands, mouths, and pockets of "Americanizing" Americans (and those under their influence), the world gross economic product has increased by almost 250 percent since 1970, while the economic gap between rich and poor nations' gross national product nearly doubled from 44:1 to 72:1 (Kovel, 2002). As a matter of perspective, in the beginning of the frontier-era this same economic gap was estimated to be closer to 3:1 (Kovel, 2002, pp. 3-6).

As a response to these alarming imperial and industrial trends, the first Earth Day occurred in 1970, honoring a counter-imaginary in which the whole-earth and "limits to growth" movements, and not just the globalized empire of a controlled-growth planetary economy, were celebrated (Meadows, Meadows, Randers, and Behrens, 1972). In retrospect, however, whole-earthers appear to have had little effect on decreasing overall one-world trends. As I discuss in the conclusion to this paper, it may be that competing images of the total globe in organic whole-earth and imperial one-world discourses are too genealogically related for a whole-earth imaginary to have greater political effect.

Thus far, this paper has traced the genealogy of the frontier imaginary from Frederick Jackson Turner to Vannevar Bush and John F. Kennedy, revealing the relationships between American imperialism, technological growth, and the dialectical conflation of one-world and whole-earth discourse in Kennedy's New Frontier. I turn next to William Gibson and John Perry Barlow, representative prophets of the "electronic frontier" and its role in the production of a contemporary Internet imaginary. A literary author and founder of the genre called "Cyberpunk," Gibson provides the most complex understanding of the potentials and dangers symbolized by the actualization of the Internet imaginary, although he reproduces it and advances it even as he subjects it to a violent critique.

Using Norbert Wiener's term "cybernetics"—the science of communication and control of human beings—William Gibson's *Neuromancer* book series envisions a vast network of computer-mediated cyberspace, and profoundly captures the post-New Frontier spirit of individual consciousness merged with global material flows of technological power, apocalypticism, and

mixtures of outer and inner-space. In Gibson's electronic frontier, transnational state and corporate powers battle for world control through the manufacture and use of sophisticated virtual networks of information (i.e. cyberspace) and advanced science and technology such as nuclear weaponry. Rogue hackers—called “net-cowboys” or “jockeys”—attempt to subvert that space for their own free ends, as they eke out both a heroic and staid existence on the fringe of sprawling technourban spaces and desertified, wasted environments (Kahn, 2003).

The cyberpunk vision, then, is in many ways the apotheosis of the thesis Turner uttered a century earlier as Gibson finds no exit beyond the frontier, which results in enduring skepticism, irony, and deconstructed heroics. In the Gibsonian one-world dominated by transnational corporations and technology, the only possible way out is in—towards the mantic qualities of the mind. However, having gone there and found that the space within (like that without) is also overseen by imperialistic technological control, Gibson can only pun that he is a sort of Turner-esque “new romancer” who poeticizes the rises and falls of the global space of Americanized empire. Although Gibson is generally portrayed as a techno-fetishist by admirers, his narratives are in many respects more directly related to whole-earth discursive concerns, though he clearly concludes that the future of organicity is pointless.

John Perry Barlow began his career as a lyricist for the Grateful Dead, a countercultural outfit and musical group from the 1960s that began as the house band for Timothy Leary's acid tests in which “electric kool aid” was the drink of choice, and whose primary goals were transcending into sublime individualism and virtual democracy.<sup>11</sup> A Wyoming rancher with a penchant for cowboy clothing and the founder of the Electronic Frontier Foundation, Barlow proselytizes on behalf of Internet technology and its democratic potential and thus represents an apex of American frontier utopianism up to the present day. Unlike Gibson, Barlow attempts to respond to imposed one-world threats by articulating cyberspace's whole-earth potential as a place where people can dwell freely and engage in self-directed commerce. Barlow's initial formulations described an “electronic frontier” in which a return to the pioneering spirit characterized by Turner could overcome the Orwellian aspects of Vannevar Bush's New Frontier-esque technoscience:

A lot remains undone. The electronic frontier remains wild and sparsely populated. But, with the Internet growing at a rate of 25 percent per month, it is likely to be flooded soon with newcomers who are not bound by its unwritten customs and etiquette—electronic equivalent of The Code of the West—, which have prevailed since its inception at MIT in the early 1970s. But we have opened the frontier, and they will come, whether we're ready for them or not (Barlow, 1991, p. 332).

In fairness, Barlow's vision captures aspects of how the Internet has developed. To varying degrees, the sheer coming together of like-minded people manages, from time to time, to expand information and communication technologies in new and unexpected cultural directions. When this happens, for a short while anyhow, state and corporate controls tend to be flouted in favor of something more direct and populist in spirit. Thus, in Internet developments like hacking, peer-to-peer file sharing, and now blogging, one can sense whole-earth feelings of association, community, and responsibility, though notions of dwelling, rootedness and organicity are often secondary or non-existent (Kahn & Kellner, 2004).

But Barlow appears to take Gibson too literally when he locates the new dwelling place for democracy and freedom in the mind of the cybnaut. This idea, for instance, is the crux of his famous *A Declaration of the Independence of Cyberspace*—another document that draws upon American history to legitimate a vision of a free technological future. In this short piece, Cyberspace is announced as “the new home of Mind” and industrial governments are asked to leave its pioneers alone to work out a communicative democracy in “a world that is both everywhere and nowhere, but it is not where bodies live” (Barlow, 1996). Barlow's Electronic Frontier Foundation, then, becomes an ironic (and gnostic) legal organization that is committed to using the body of American law to conserve the disembodied space where techno-identities come together to form communities in the one-world of virtual utopia (Kapor & Barlow, 1990). Here, then, the electronic frontier remains open and American progress is preserved. Where Frederick Jackson Turner had argued for the development of the American spirit, John Perry Barlow answers the call and adds an exclamation point. Barlow transforms the frontier imaginary into the Internet imaginary by promoting the complete virtualization of space; the only frontier left to conquer is between the known and dominated earth and the mysterious abstraction of the cybermind. Therefore, although his electronic frontier vision intones whole-earth guiding values of dwelling, community attachment, and responsibility for habitat, like Gibson he also directly contradicts these by promoting a one-world vision of evaporated organicity in favor of technological connections.

Barlow is also too universalistic, progressivist, and hip to mobile styles. He promotes a frictionless virtual space beyond the frontier of mainframes and silicon chips, but it is unclear how this space is at once reliant upon the cyberpunk ICT infrastructure of controls and yet completely free of it at the same time. He says that everything will increasingly be reduced to bits of information and that “information wants to be free” (Barlow, 1994), thereby developing more equitable and humane commerce. Yet Barlow's imagination of this world seems close in some respects to mega-Internet billionaire Bill Gates's notion of “friction-free” capitalism (Gates, 1996, pp. 180-207). Thus, Barlow may be muddling a counter-

hegemonic whole-earth discourse with a more slick and updated one-world variety.

In Fredrick Jackson Turner's hands, the American frontier was a place in which steely independence helped to re-found the modern nation state and served as an engine for future expansion and the taming of ever-new frontiers. Authors of the electronic frontier like Gibson and Barlow, but also ideologues such as Kaczynski (1995), Rheingold (1993), and Sterling (1993), characterize the present age as one in which the fate of the planet hinges on individual freedoms. In general, the electronic frontier discourse that infused the Internet imaginary of the 1990s was unable to resolve the dialectical opposition between one-world and whole-earth values. Instead, by simply positing them in paradoxical combinations, electronic frontierists like Gibson and Barlow demonstrate how emergent social concerns for the whole-earth are deeply embedded and integrated into the present one-world cultural and political order that is in many respects their enemy.

### **In Conclusion: One-Whole-Earth?**

Some contemporary theorists of technology, drawing upon the Internet's progressive potentials, continue to evoke the hopes expressed by Al Gore's vision of the Internet as an "information superhighway." In these visions, the technological compression of time and space into an "everywhere and nowhere" can provide the foundation for a global democracy—a new and truer America that extends beyond its national boundaries—by providing instantaneous, planetary access to all information, both great and small. In theory, access to such information would be equal and thus the information itself would be equalized in the process.

But, as I mentioned previously, the Gore vision too awkwardly combines the spirit of whole-earth promise with a package of one-world empire. The image of the superhighway itself is a direct evocation of Vannevar Bush's New Frontier-era scientific and nationalistic infrastructure. Billed as liberating for the individual, the U.S. government's interstate highway plan was also an upscaling of the economy, and allowed for the radical transformation of a subsistence-oriented family economy of place to a mass-market national economy of global state and corporate capitalism. Thus, while digital information may positively proliferate and exotericize knowledge—acting as a sort of Pony Express for the New Millennium—we must not forget Marshall McLuhan's mandate that media technologies always amplify some aspects of cultural life to the detriment of others (McLuhan & McLuhan, 1988). In this way, the globally progressive Internet also runs roughshod over place-based knowledge systems and "other" forms of non-Western, or traditional wisdom (Bowers, 2000). To respond, as

progressive Internet universalists almost always do, that other forms of knowledge can find their own place within the digital community, is simply to beg the question. In more frank terms, we must also not forget that the Pony Express (while a great advance in frontier communication) was instituted as a means to cut the time west coast bankers and merchants had to wait to complete their commercial transactions in half.<sup>12</sup> We can say the same of today's Internet as well.

Rebecca Solnit, in *The River of Shadows* (2003), her great book on the role of technology in constructing the frontier West, describes the *fin de siècle* of the whole-earth mentality of places and its replacement by a concentration on increased mobility along the global surface. She notes that this loss of the whole-earth is something that is shared by both the American West and electronic frontiers, and while she does not directly use the term "one-world" in her answer, she intimates that the reason for this shared loss is each frontier's mutual involvement in the construction of a one-world cultural imaginary:

One way to describe this transformation of the world whose great accelerations came in the 1830s, the 1870s, and the age of the computer is as increasing abstraction. Those carried along on technology's currents were less connected to local places, to the earth itself, to the limitations of the body and biology, to the malleability of memory and imagination. They were moving into a world where places were being homogenized, where a network of machines and the corporations behind them were dispelling the independence of wilderness, of remoteness, of local culture, a world that was experienced more and more as information and images. It was as though they sacrificed the near to gain the far (Solnit, 2003, p. 22).

Interestingly, Solnit (2003) notes that for the Victorians of the frontier era, there was "no simple dichotomy, however, between nature's pace and the railroad, between images and the natural realm of the senses" (p. 22). Technology at once also increased a dawning consciousness, love, and respect for nature. Railroads and cameras were built for wilderness excursions, and landscape photographs abounded. Indeed, an entire culture became obsessed with natural experience and collection—culminating, perhaps, in the American Conservation movement that helped to preserve many of our most enduring natural places. The question becomes, then: Is this true also of our own culture? Is there, in the end, much difference between the frontier imaginary and its Internet varietal? Have contemporary whole-earth concerns arisen largely *because of*, rather than *in spite of*, one-world technological advances?

Today, as we ship information and democracy around the globe at the speed of world commerce, satellite relays, and Pentium-class processing chips, the once "Western" movement—which was always, in fact, a more hybridic

experience—is now exposed as multi-directional on a planetary scale. The metals required to fashion workable information and communication technologies designed and patented in America, are mined from African villages and then shipped to southern and eastern Asia for manufacture. When the Internet commodities are completed and ready for purchase, they are increasingly shipped to every continent save Antarctica. From there, when connected to the existing global information and communication infrastructure, these technologies can establish new relationships between places, as well as new modes of being within those places. Such relationships can serve (and are serving) to undermine the center/periphery models of imperial communication flow and geographical control.

Meanwhile, giant international conferences like the World Summit on the Information Society, which are backed by capitalist-minded organizations such as the World Bank, are planning and promoting the idea that Internet-housed information is an emerging global force for equity. Unfortunately, what is never accounted for in such conferences is that it is often the less developed countries themselves that provide the resource and labor costs for the very ICTs that are offered to them as a panacea by which they may begin to develop a more sustainable approach to living.<sup>13</sup> Therefore, it is not unfair to suggest that a process is underway by which the economies of less developed countries are being “Americanized”—meaning that less developed countries are involved in a process which serves to divest them of their natural holdings at a cost favorable to American buyers, so that they can be sold a product based on those resources at a cost favorable to American sellers.

I think it would be disingenuous, however, if I did not also admit that many are involved in an attempt to fashion something like a whole-earth politics composed of an international federation of sustainable information societies (Kahn & Kellner, 2005c). It would also be short-sighted not to acknowledge that many of the great wrongs currently happening on or to the planet are being communicated, educated, and acted upon in an unprecedented fashion, and that this is due, in large part, to the revolutionary modes of progressive exchange offered by technologies like the Internet. In other words, the various technologies associated with the Internet imaginary of planetary freedom, democracy, and unity in diversity cannot simply be dismissed as entirely imperialistic tools, as producers of a one-world vision. ‘Whole-earthers’ have used them as well, and have used them effectively to combat the further extension of global empire across the surface of the globe. In fact, the current environmental movement attributes numerous successes to the Internet—reducing publishing costs, facilitating more effective outreach, and even furthering direct action tactics.

Purveyors of the whole-earth discourse in its present form of globalized localism encounter a problem, however, as their message is often difficult to

distinguish from the localized globalism of their one-world imperialist counterparts. Each in their own right offers visions of self-sufficient communities existing on social frontiers, each speaks the rhetoric of democracy, freedom, and equality, and both appear to work from a sense of global mission, “to redeem the world *ad termini orbis terrarum*” (Cosgrove, 2001, p. 265). Thus, while it may be tempting to promote a whole-earth discursive imaginary in the form of either a critique of imperialism or an activist response to it—the whole-earth platform must also be viewed with a degree of skepticism and caution.

The historical situation of the present age is increasingly envisioned through the lens of the Internet imaginary, which is incontrovertibly both whole-earth *and* one-world. Further, whole-earth discourse appears to be tied to and involved in a lineage tradition of one-world frontierism. Like Venn diagrams, they inhabit similar and disjointed imaginary spaces. In the end, they might be thought of as forms of unhappy dramatic partners—a sort of Janus paradox of the American empire as virtual democratizer of the globe. As the Kiowa poet N. Scott Momaday is remarked to have said, the American West “is a place that has to be seen to be believed, and it may have to be believed in order to be seen.”<sup>14</sup> The same might be said of our one-whole-earth as it is imagined through the dynamic sweep of the technological frontier. To fail to recognize this in our technopolitics will be to choose sides between one-world and whole-earth discourses in a way that prevents the mediation necessary to provide routes out of a long-standing dialectical impasse. Is one-whole-earth our next frontier, then? Or is it time to rid ourselves of odious frontier ideological baggage altogether, and attempt to reconceive our relationship to the Earth in ways that move beyond the global and the local distinction?

### Notes

<sup>1</sup> This paper draws upon many of the insights offered by Cosgrove (2001) concerning empires, globalization, and figures of planetary directionality. See pages 262-267 for a more detailed distinction between one-world and whole-earth discourses.

<sup>2</sup> Using Henri Lefebvre’s language, we might assert that the frontier is a produced space involving spatial practices, representations, and representational spaces themselves (Lefebvre, 1991, p. 33). The entirety of this ongoing production is what I am here referring to as an “imaginary”: the deep semiotic space that both produces and is produced.

<sup>3</sup> While the Internet obviously relies upon a transnational economy to function, there are many reasons for linking it to Americanization. For example, as will be touched upon later in the paper, the fledging Internet began as the ARPANET,

and was originally a project of the U.S. Department of Defense's Advanced Research Projects Agency (ARPA). Furthermore, despite the growing number of users and websites in Europe, southeast Asia, and Latin America, the United States is still far and away the country most involved with the Internet (Kahn & Kellner, 2005b).

<sup>4</sup> The Zapatista movement is often hailed as a clear example of this type of political use of the Internet as an anti-imperial technology. For a further discussion of the radical technopolitics of the Internet, see Kahn and Kellner (2005a).

<sup>5</sup> Perhaps unsurprisingly, the role of women is also lacking and so Turner's thesis is also patriarchal. As Sandra Myres (1982) has noted, "Frederick Jackson Turner's frontiers were devoid of women. His pioneers were explorers, fur trappers, miners, ranchers, farmers, all of them male" (p. 5).

<sup>6</sup> Many believe that America was not interested in science education prior to the shock and awe of the Soviet Union's successful launch of the Sputnik I satellite in 1957. We can see from communiqués such as this, however, that Sputnik may be more properly read as a media spectacle that drew upon an already existing move in America towards furthering the scientific frontier. Thus, Sputnik provided the imaginative capital to further *en masse* a pre-existing national strategy.

<sup>7</sup> Further images of the American frontier during the Cold War era, fostered by the Hollywood Western, also deserve a diagnostic critique in the context of this paper. Turner-esque frontier ideology and *de facto* American imperialism combined to draw upon and produce a modern cultural grotesque of the American West. Beyond merely studying the imagery and thematics of television productions like *The Lone Ranger* and *The Rifleman*, a critique of the frontier imaginary could extend to include counter-images such as Slim Pickens's performance as Major "King" Kong, riding the atomic bomb to Earth like a bucking bronco in the film *Dr. Strangelove*.

<sup>8</sup> The idea that America is in the process of inhabiting and crossing a new frontier in science and technology that will strengthen civic life is also the central theme of Bush's 1933 essay titled *The Inscrutable 'Thirties'*

<sup>9</sup> For more information on the connection between Turner to Kennedy, see Carpenter, 1977.

<sup>10</sup> Kennedy's plan to send Americans extra-terrestrially is matched by his Peace Corps program that sought to extend the influence of U.S. citizens terrestrially, a sort of one-world communications network in its own right.

<sup>11</sup> The Dead themselves represent an important benchmark on the way to the electronic frontier and the Internet imaginary, as they were some of the first to mix old frontier Western music with the latest sound, visual, and Internet technologies. They also hybridized a notion of fringe communal self-sufficiency with global mobility and corporate capitalism. Thus, as a top-selling global

cultural influence, the Grateful Dead can be seen as progenitors of “one-worldism,” yet the concern for “whole-earth” values in the band’s lyrics, imagery, and Deadhead community practices signals the opposite.

<sup>12</sup> See the Museum of the City of San Francisco’s “When the Pony Express was in Vogue” at: <http://www.sfmuseum.org/hist1/pxpress.html>.

<sup>13</sup> See Harden (2001) for an excellent summary of the effects of coltan mining—perhaps *the* metal behind the Information Age—on the Congo region. For many underprivileged countries, the end result of being depleted of natural resources for the New Economy is the “opportunity” to further toxify their environment as bearers of First World e-waste (Grossman, 2004).

<sup>14</sup> See the website for Ken Burns and Stephen Ives, *New Perspectives on the West*, at: <http://www.pbs.org/weta/thewest/>.

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### **Author**

Richard Kahn is the Research Associate in Ecopedagogy at the UCLA Paulo Freire Institute. His research interests are based in the critical theory of education, and involve pedagogical issues of promoting technological sustainability in multicultural movements for social and ecological justice, challenging speciesism, and charting the conceptual foundations for ecoliteracy in the philosophy and history of education. He is co-editor of two current books: *Theory, Facts, and Interpretation in Educational and Social Research* (Rodn “WOM” Publishers, 2004) and *The Douglas Kellner Reader* (Paradigm Publishers, in press).