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American Technospace and the Emergence of Popular Modernity

Imagining the Nation

Consider the kind of maps that were, until very recently, generally used in primary and secondary education in the United States: maps that tear the Eurasian land mass in two so that North America can have the privilege of being imaged at the center of the world; maps that render South America as about the same size as Greenland, whereas in fact it has nine times the land mass of that ice-covered isle that is both misnamed and misrepresented; maps that prioritize political boundaries over natural ones, thus rendering North America as a neat stack of brightly painted boxes (little irregular ones on the right, big rectangular ones on the left) rather than, to adopt another perspective, a system of geographic regions. The mythohistorical power of these maps is evidenced in one simple and absurd example: every year a fair number of tourists will drive well out of their way just to stand at the only place where four state borders (Arizona, Colorado, New Mexico, and Utah) meet. The "game" of standing at the spot where the "four corners" meet is a kind of real-space enactment of a popular elementary school activity as described in a 1937 geography primer, in which pupils create cardboard maps of the continental United States, cut it up along state boundaries, shuffle the pieces, and put it all back together—"the one who does it the fastest wins" (G. Miller 1937, 13). We are talking here about a particular way of thinking about space.

But what is space? Or more to the point, *where* is it? The mathematician Carl Gauss held that whereas number is a product of mind,

space has a reality outside the mind, and thus its laws defy a priori description (qtd. in Innis 1951, 92). This position, informed as it is by Euclid (space as a chartable domain, defined by axioms and geometric postulates) and Newton (space as a container; "absolute space . . . always similar and immutable" [Kern 1983, 132]), largely accounts for the accomplishments of positivist history and geography. It is a position that compels us with its "common sense"; even those who are well aware of the various and complex forms of subjective and intersubjective spatiality ultimately succumb to "an overarching and objective meaning of space which . . . in the last instance . . . is pervasive" (Harvey 1989, 203). Nevertheless, we may want to quarrel with this view, as does Edward Said when he states that space is "something more than what appears to be merely positive knowledge" (1978, 55)—a statement that echoes the counterpositivism of Leibniz, Kant, Piaget, Husserl, Bachelard, and others who have posited the "whereness" of space, to one extent or another, within the human subject.

If we draw a distinction between the process of "mapping" and the product that results, "maps," we can conclude that the former is an imperative of consciousness—the need to situate ourselves within a world that is beyond our immediate perceptual reach—while the latter is a technology that radically expands our ability to do so by providing representations of the world in which we live. Maps originate in their use-value in terms of our desire to situate ourselves in the world and to operate effectively within it. But in the natural attitude in which we use maps to extend our vision and abilities, we forget that they are founded on a contradiction. As Denis Wood remarks, maps give us a "reality beyond our reach . . . a reality we achieve no other way. We are always mapping the invisible or the unattainable or the erasable, the future or the past, the whatever-is-not-here-present-to-our-senses-now and, through the gift that the map give us, transmitting it into everything it is not . . . *into the real*" (1992, 4–5).

Consider also the broad variety of uses for which we employ our maps. In some cases, as with a nautical expedition following the first set of exploratory maps of a coastline, or in the case of the lost and exhausted motorist examining the flashlight-illuminated road map while searching desperately for the interstate sign on the side of the rain-swept highway, the user will consult the map as he or she actually views the terrain, thus forming a kind of primary relationship of self-map-world. In other cases, as in geography education, maps have a

very different and more secondary relation to the user, who will probably never visit the places he or she sees on the map and will know these places and peoples in an indirect and inaccurate way. In this latter usage, maps serve, not an immediate use-function, but a secondary and mythohistorical one: that of assigning a given hermeneutic value to the world (both spatially and temporally, though our focus here is on the former) beyond immediate apprehension, telling us what it *means*. In the former instance, the use-value of the map is more iconic in nature, of value for its immediate resemblance to that which it represents, while in the latter, the map is closer to text, to Saussure's "sign proper" in its arbitrary and conventional character and in its relationship to cultural signification in the form of the abstract mythic narratives that Barthes calls the "second order semiological system" ([1957] 1977, 114–15).

The post-Renaissance map, whose mode-of-presentation we very much take for granted, is characterized by its fixed, elevated, out-of-reach viewpoint (Edgerton, qtd. in Harvey 1989, 244). This is not at all a "natural" way of looking at the world (although it is a very "useful" one), for perhaps there is no "natural" way of looking; this map, like all mimetic practice, is culturally and historically coded and "loaded," as just one comparative look at a modern (i.e., post-Renaissance) map side by side with a medieval map, with its emphasis on the way terrain is experienced (as in Matthew Paris's Itinerary Map 1253, showing a narrow strip of land along a particular route), quickly demonstrates (cf. Harvey 1989, plate 3.3). The progeny of these Renaissance maps are the geopolitical maps used in compulsory education, and they add another layer of seemingly "natural" meaning—a more overtly political and ideological meaning—to the spatialization of the world and thus to the way the perception of space is acculturated.

The map developed by Flemish cartographer Gerhard Mercator in 1569 was designed specifically for navigation, and for this reason, it renders compass directions as straight lines. The Mercator, which makes the land masses north of the equator appear much larger than those to the south, was eventually transferred from one use-context, navigation, to another, the pedagogical one of providing young people with a view of the world; ultimately, the Mercator became the most widely proliferated, and therefore most immediately recognizable, world map. We can regard this as a mere accident of history: the Mercator was familiar and available, and it was innocently transferred from one context to

another as its intended use was forgotten, a process that describes the evolution of all sign systems, like words whose original metaphoric value has worn away with use ("coins which have lost their pictures and now matter only as metal, no longer as coins," as Nietzsche says in one of his notebooks from the early 1870s [1954, 47]), or as with the maypole, whose original ritual symbolism became mystified and simultaneously mundanized as it became a mere toy. On the other hand, is it a "mere coincidence" that the world's most popular, recognizable, and familiar map "shows Britain and Europe . . . as relatively large with respect to most of the colonized nations?" (Turnbull and Watson 1993, 7). After all, maps with superior use-value in terms of conveying relative land mass were available: as early as 1570, the "sinusoidal projection" world map, which preserved relative land mass, was available; in 1772, Johann Heinrich Lambert proposed a "cylindrical equal-area projection"; and in 1855, James Gall devised an alternate world map. (It was almost identical to one designed by Arno Peters [who was apparently unaware of the Gall map] in the early 1970s, and is now known as the Gall-Peters Projection.) And in 1925, J. Paul Goode developed the "homolosine equal area projection" (commonly compared to a flattened orange peel), which has the added value of constantly reminding the viewer that he or she is looking a flat representation of a spherical object (cf. Monmonier 1995, 9–15). Better maps, then, were available; as Monmonier demonstrates, there was no shortage of criticism of the Mercator map, perhaps stated most strongly by U.S. State Department geographer S. Whittemore Boggs in a 1947 issue of *Scientific Monthly:* "[T]he use of the Mercator projection for world maps," Boggs declared, "should be abjured by authors and publishers for all purposes" (qtd. in Monmonier 1995, 21). While, as Monmonier reveals, the Mercator has largely disappeared in educational and responsible commercial outlets (as in the Hammond, Rand-McNally, and National Geographic publications), it continues in popular culture, "thriving" in the form of wall maps, promotions, and "cheap atlases and encyclopedias occasionally sold in supermarkets" (22). Certainly its mythic power, like that of the color-coded political boundary maps, continues.

What this demonstrates is simply that the pedagogical use of maps is ideologically interested. And this is true not only in the case of maps that distort the world to one's own ideological advantage: it is also true of attempts to make maps more "accurate." A good historical

example of this is found in the first concerted initiative for compulsory geography education with an emphasis on "accuracy," which was taken up by the French after their humiliating loss to the Prussians in 1871. In the years following the Franco-Prussian War, the French government concluded that insufficient mastery of geography on the part of their field commanders played a key role in the defeat, and the responsibility for the rectification of this educational shortcoming was delegated to the Ministry of Public Instruction, which responded vigorously, designing and implementing a new geography curriculum (Graves 1975, 42–49). Other nations followed suit, and in the late nineteenth century there was a general flourishing of geography education. The effect of politics and ideology on geography education (and ultimately, on the ideology of space) is also well-illustrated in the American sphere. In the last decade of the nineteenth century, under the influence of Harvard professor William Morris Davis and with the mandate of the National Education Association, American education began a concerted move towards physical geography, which remained a strong element of compulsory education until World War II. However, the quality of geography education was inconsistent, a source of irritation for critical educators like G. Stanley Hall, who in 1911 declared that school geography was a sloppy mixture of disciplines, written by generalists who lacked true geographical knowledge and driven by textbook profits rather than scholarly merit. Hall declared that geography was the "sickest of all sick topics in the curriculum" and an expression of both the mediocrity of American pedagogy and "the character of our people, who crave to know something, but not too much, of everything . . ." (1911, 555–56).

After World War II, the social studies movement virtually destroyed whatever advances had been made in geography pedagogy (and, as Hall's commentary reveals, those advances were at best partial, limited, and inconsistent). While the advanced study of geography—regional or areal differentiation in the 1940s and 1950s, and later the rise of human geography—continued in the universities, in compulsory public education the discipline became largely absorbed by civics and history in an effort to promote patriotism and the idea of the United States as a model for the rest of the world. And thus it is that we come to the map of brightly painted boxes, disproportionate continents, and Winnebagos full of westering vacationers and retirees stopping for a photo opportunity at "The Four Corners" in the American

Southwest to thus photochemically inscribe their virtual injection into the American geopolitical map.

Another way in which space is ideologically constructed is found in the case of geographical directions—places "Other" than where we are. According to Said, "The East" emerges in the European imagination not as a positive geographic entity, but as an imaginative space that signifies, among other things, "insinuating danger . . . [where] rationality is undermined by Eastern excesses, those mysteriously attractive opposites to what seem to be normal values" (1978, 57). Such a concept of the East—and, by extension, attendant racial stereotypes—is abundant throughout Western intellectual history and is readily found in popular culture and, again, in pedagogical practice. In the earliest American geography "grammars," written by the father-and-son team of Jedidiah ("the father of American Geography") and Sidney Morse and in use from 1784 to at least 1828, racial and ethnic typecasting is considered part of the legitimate scope of geography. Thus, J. Morse's *Geography Made Easy* (1784) tells pupils that Spaniards are "lazy, proud, cunning, and revengeful" while Swedes are "grave, self-opinioned, and distrustful." (Relatedly, Morse used his *Geography* to "square away the untidy aspects of Puritan myth" [Seelye 1998, 151–52]). Morse's example was not ignored: shortly thereafter, in Nathaniel Dwight's *A Short but Comprehensive System of the Geography of the World* (first edition 1795, many editions thereafter), we learn that the Irish are "vehement," Turks "morose, treacherous, passionate, [and] unfriendly," and New Englanders "the most intelligent people in the world." The latter sentiment accorded with the elder Morse's heroic rendering of the New England settlers, a practice that has informed myths and rituals of the American settlement to the present day (qtd. in Brigham and Dodge 1933, 3–8; cf. Seelye 1998, 152). Similarly, B. Franklin Edmands's *Boston School Atlas* (1832) divides nations into four categories: savage, barbarous, civilized, and enlightened, with the final group exerting "the greatest and best influence on mankind," and of course "the United States and some parts of Europe are of this class." The *Boston School Atlas* speaks "the regularity and symmetry of their features" in describing the "Caucasian race," whereas other races seem to be a distortion of norms; they are described as having "thick lips," "flat noses," and "projecting foreheads" (Edmands 1832, 18).

The assignation of ideological value to geographical entities is particularly evident in the American notion of "the frontier," which serves

less as a historical "reality" than as an index of a particular ideological orientation toward the world. If, as Spengler contended, each culture's conception of space is its "prime symbol" and an informant to its every aspect (qtd. in Kern 1983, 138), then perhaps the substratum or "prime symbol" of all American myth and ideology is the notion of "frontier." Frederick Jackson Turner's widely influential frontier thesis (*The Frontier in American History* [1893]) employed U.S. census data from 1890 to postulate that an ever-advancing American frontier, was, until its final closure in the late nineteenth century, the engine of American history. Turner's thesis reflects a "scientific" approach to history—an attempt to impose an empirical discourse on the terrain of political space as well as on the discipline of history (K. Klein, 1997, 14; cf. McNeill 1986, 3–22). The ideological underpinnings, however, of Turner's thesis are evidenced in both his postulation of a binary historical mythos that pits "civilization" against "savagery" (a received idea, one we saw in the 1832 Boston *Atlas*) and in his definition of a specifically American frontier, which unlike a European frontier (a border between populated regions) refers to a line between populated and unpopulated "free" land. The equating here of "savage" and "free land" reveals that Turner's historical explanation works only if we assume that the Hispanic and Native American peoples who occupied North America before the Anglo conquest and expansion did not do so in any legitimate way. Thus, Turner's thesis placed any questioning of American imperialism under erasure, suppressed by a quasi-empirical historical discourse in the service of myth, that is to say, a mythohistory par excellence (Turner 1893, 203). The mythos of the Turner thesis was apparent from the very beginnings of the Anglo-American project in 1620, when William Bradford, who would become the first governor of the Massachusetts Bay Colony, bemoaned the "wild and savage" (62) aspect of the new land and typologically invoked the image of Moses on Pisgah in his account of the arrival of the Pilgrims in *Of Plimouth Plantation*. More accurately, the "historical" landing at Plymouth initiates mythohistorical thought through the formation of what anthropologist Victor Turner calls an "ideological communitas" (qtd. in Seelye 1998, 9), while later, as Seelye painstakingly demonstrates throughout *Memory's Nation*, the event itself becomes the object of reverential and sentimental mythologization, as in Charles Lacy's famous engraving, *The Landing of the Pilgrim Fathers* (1850). We find further evidence of the development of the idea of

Manifest Destiny in the first colonial maps: in the 1612 map of the Virginia colony, as in John Speed's 1627 *A Prospect of the Most Famous Parts of the World* and Augustine Herrman's 1673 map of Virginia and Maryland, native peoples are represented as little more than decorative elements, literally in the margins of the map (King 1996, 105). Thus, the Eurocentric biblical interpretation that constituted the myth of Manifest Destiny became in Turner an empirical justification, which would later, in the realm of popular entertainment, be transformed back into mythohistoric narrative, particularly in the tales of the American West that have long been a staple of television and Hollywood film.

Turner's writing is a good example of the workings of the social and ideological construction of political space, an activity determined not so much by physical reality (e.g., empirical space) as it is by other ideological processes and constructs, both prior and ongoing. That is, the American notion of frontier is a "fact" of social history: for the American "frontier" suggests growth and opportunity, and furthermore informs a whole range of cultural postures, as in Kennedy's political program (the New Frontier), or the exploration of space (the Last Frontier), or the post–World War II move to the suburbs (the Crabgrass Frontier). But the grounding of this social condition is mythohistory—the redemptive myth of a continuing frontier, which is, Elazar notes, "the source of renewal that sustains the United States as a 'new society'" (1994, 75). Or as Shames states, the "fantasy of empty horizons and untapped resources has always evoked in the American heart both passion and wistfulness" (1989, 30–31). And, armed now with these observations regarding geography education, Turner's thesis, and the transformation of both Puritanical (biblical-mythic) and Turnerian (empiricist) discourse into that of popular modernity, we may revisit the "Four Corners." The tourist may observe this spot with reference to the American political map (the point at which Arizona, Colorado, New Mexico, and Utah meet) and feel a sublime sentimental nostalgia for the "open West," with its the erasure of the Other. (The "Four Corners" is also part of the land of the Navajo Nation, the largest and most populous North American Indian reservation, and by that Other conceptualization, there is no "corner" there at all.)

Eric Hobsbawm, in his discussion of the "invention" of the modern nation-state (France in particular), postulates that the three most important strategies in the invention of nations are public ceremonies,

public monuments, and public education ([1983] 1994, 77). Maps are a technology that emerges from, first, a fundamental phenomenological impulse (the sense of emplacement in a surrounding world), and second, from an immediate use-value. In the context of "inventing" political entities and mass loyalties, their use-value is shifted from an immediate one to a mythological one, a process that is completed when the map becomes naturalized. An example of this is found in the notion that north is at the "top" of a map; such an idea is of course purely conventional, for in the largest geospatial context, north may be a magnetic pole, but it is certainly not the "top" (Turnbull and Watson 1993, 6–7]; nevertheless, this is a "natural" idea, and one can quickly demonstrate this "naturalness" by simply looking at a world map "upside down," which will inevitably strike one as being "wrong." Thinking back to the white face as it was described in the 1832 *Boston School Atlas* (which here stands as an example of a widely accepted, naturalized view) we see a parallel: the white face is normal and "symmetrical," while black, brown, and yellow faces are distortions; therefore, the white face is like the map "right side up," with any other form of representation constituting an abnormality.

The nation-state, from its origins, has a particular relationship with cartography, as it does with other technologies—with, for instance, literary production and communications technology. According to Benedict Anderson, the political order of the modern world could only happen when, for a variety of reasons, the great "transcontinental sodalities" (Christendom and Islam) were no longer ideologically viable ([1991] 1994, 89). It is here that technoeconomic change plays an important role; improved printing technology in the sixteenth and seventeenth centuries created a new permanency to the national vernaculars, and the era of "print capitalism" set the stage for the rise of the modern nation-state. The "rise of the novel," as Watt suggested, mirrored the trajectory of capitalism in the early eighteenth century, but it also served to help the nation-state to congeal; the novel (and the newspaper) helped to "standardize language, encourage literacy . . [and] remove mutual incomprehensibility," and generally abetted the intersubjective, psycholinguistic encoding of national identity—in short, the nation is imaginatively conjured with the aid of novelistic discourse and the technoeconomics that support the culture of the novel (Brennan 1993, 48–49; cf. Anderson [1991] 1994, 35). There is, thus, a relationship of necessity between communications technology and

nationalism. Karl Deutsch grasped this singular insight best, and he made it the sine qua non of his definition of nation: the national group (a "people") is "a larger group of persons linked by . . . complementary habits and faculties of communication" (1953, 96).

However, the ways in which technologies "naturalize" the nation depends on the specific character of the technologies themselves. Seton-Watson identifies the older nations as those that had "acquired national identity or national consciousness before the formulation of nationalism" and the newer nations as those in which nationalism among the masses was engineered by the self-conscious direction of a revolutionary leadership ([1977] 1994, 136). But in the United States and Canada, the historical foundations of the "old" nations do not fully apply, and the conditions of national formation are somewhat different than in the "new" nations, for in North America (what we might call the "new new" nations), industrial technology to some extent precedes culture, particularly if one regards North American national formation as taking place in the mid-nineteenth century rather than in the closing decades of the eighteenth century. In North America, newer technologies were employed in the process of imagining nationhood. The railroad and the telegraph reencoded ideological space by assisting the ongoing formation of a unitary political identity—a belief in the United States as a unified spatial field and, hence, unified ideological field.

The emergence of the telegraph in the 1840s played a special role in the technoeconomic reencoding of geopolitical space, and it seems particularly fitting that the telegraph's inventor, Samuel Morse, was the grandson of Jedidiah Morse, whose role in geography education we have already noted. It is reasonable to assume that the younger Morse, through constant exposure to the concepts of distance and space that preoccupied both his father and his grandfather, developed his interest in the space specifically as it relates to communication (that is, space is inevitably a communications barrier) (Blondheim 1994, 30). And indeed, the ultimate importance of telegraphy—historically, socially, and phenomenologically—is rooted in that primary relationship between space and communication and in the way in which telegraphy radically modified this relationship through the phenomenon of time-space compression.

There were a number of pre-electronic methods for sending high-speed messages. In the ancient world, the use of fire signals to organize

military campaigns amounted to a kind of "ancient telegraph" (Hershbell 1978, 81), and as Crowley notes, the ancient Greeks used polished metal and reflected sunlight to send such messages; in Africa there was the talking drum, in North America, the smoke signal; in early-nineteenth-century France, the mechanical semaphore. The telegraph however, because of its scale, marked a leap from a *transportation* model of communications to a *transmission* model; for the first time, transportation and communication were truly separate. This quantum technological transformation meant that for the first time not only could information move independently of and faster than physical entities, but it could control the future movement of commodities (Crowley and Heyer 1991, 124). This in turn, Carey contends, informed a parallel economic shift from arbitrage (speculation based on spatially separate regional markets) to futures (in which space collapses and speculation is based instead on *time*—the possible future value of a commodity) (1991, 135).

Whereas Americans were becoming accustomed to the conquest of space and time entailed by the steamship and the locomotive, the disjunctive shift from the transportation to the transmission model of communication presented new conceptual difficulties. As the telegraph was not used by any large number of people directly or in a domestic-use context (as would prove to be the case with later technologies), it was not, in any direct way, part of the everyday life-world. We can, however, witness the reactions within the smaller social circles of the power elite to this new technology. The very uncanniness of the telegraph, as Blondheim reveals, was such that its invention was probably more easily accomplished than its acceptance by the legislators and business leaders whose support was needed in order for Morse to obtain the needed start-up capital. In the earliest demonstrations of the telegraph, the power brokers Morse wished to court suspected that they were the victims of an elaborate hoax. The difficulty was in convincing them that "the clicking machines they were watching were actually responding to operations taking place miles away," and the general suspicion aroused by the device is well-illustrated by the fact that the first appropriation bill for the telegraph presented to the U.S. Congress in 1843 was encumbered by a rider for funds to support mesmerism research (Blondheim 1994, 31–32).

As Blondheim notes, in 1844, Morse set up a demonstration designed to win over the skeptics: he successfully telegraphed the results

of the Whigs' national convention in Baltimore to Washington, D.C., twenty-two miles away. When the conventioneers arrived in Washington nearly two hours later, they confirmed what had already been telegraphed—that the relatively unknown Frelinghuysen has been chosen as Henry Clay's running mate, a development that no one, much less Morse and his assistant, could have known (Blondheim 1994, 31–32). Significantly, this public demonstration of the validity of the device established that the telegraph would be subordinated to the older print technology: it would be a handmaiden technology that would only be used by a new class of information technicians, the telegraph operators, in the service of the newspapers and news agencies. The effect, then, of the telegraph, in terms of mass intersubjective experience, is secondary in nature. The older form of nationalizing media, Anderson's "print capitalism," mediated the new media, thus providing an instance of what I will call hypermediation (the process by which one medium directs the reception of another).

While the novel, Brennan observes, accompanied the formation of the nation-state by "objectifying the 'one yet many' of national life" (1993, 49), the newspaper was just as important (perhaps more so) in the United States, with its limited literary output in the early nineteenth century; this is particularly true when we turn to journalistic representations of the telegraph during its first decade. The journalism of this period abounds with laudatory manifestos devoted to the telegraph. One of the most florid practitioners of the telegraph disciples was James Gordon Bennett, editor of the *New York Herald*, the best-selling newspaper in the United States at that time. According to one of Bennett's columns from 1844, the telegraph would "blend into one homogeneous mass . . . the whole population of the Republic. . . . [It could] do more to guard against disunion. . . . than all the most experienced, the most sagacious, and the most patriotic government, could accomplish" (qtd. in Hietala 1985, 197). The metaphor that soon emerged imaged the railroad and telegraph as the muscles and nerves of the national body (an ironic conceit, given that the railroad lines, at the local level, would soon become the standard boundary between white and black communities, thus dividing the nation). Bennett was also a strong supporter of the war against Mexico, and indeed, he went even further than most pro-war spokesmen by advocating the American conquest of *all* Mexico, not just the northern provinces of California and Nuevo Mexico. Bennett's two political

positions (pro-telegraph, pro-war) were not unrelated: the imagining of nationhood entails not only metaphors of national unity, like the railroad and telegraph system, but also the imagining of the Other who stands beyond the national boundary and who is often perceived as a threat to it. Indeed, the connection I have been exploring here between the conceptualization of space, technology, and political ideology is borne out by the general tenor of Democratic Party rhetoric during this expansionist period, for the remarks of the party leadership often betrayed their feeling that the "conquest of distance was as important . . . as the conquest of Indians and Mexicans" (Hietala 1985, 197).

The older print media, we see, metaphorically rendered the telegraph in terms of national unity, and in this example we come to face with the methodological problem of developing phenomenal descriptions of technological experience, a problem rooted in the complexity of social and textual constructivism vis-à-vis technophenomenology. Providing phenomenal descriptions (or trying to get at such descriptions through historical accounts) is problematized to the degree that the response to a given technology has already, to some extent, been directed by another medium (usually a previous and already familiar one), which in turn provides a mythic framework for the conceptualization of new communications technologies.

The next major development in communications technology was telephony. Its establishment and history demonstrate a continuity with telegraphy, but it also contributes to the development of popular modernity in ways that go well beyond its primary construction (e.g., populist politics and media guidance of popular opinion) during the Age of Manifest Destiny.

The telephone was initially conceptualized in terms of its only existing analogue and predecessor (the telegraph, of course), a conceptualization that was probably abetted by the fact that many of the early organizers of telephonics had begun their careers in the telegraph industry (this accounts for the fact that the telephone's first imagined use was that of allowing telegraph operators the ability to talk to one another [Lubar 1993, 119]). Again, we see that new and initially uncanny technologies come to us only through the mediation of older, naturalized technologies. More significantly, however, telephony demonstrates a continuing pattern of new technologies being mythopoeticized and ideologically co-opted through hypermediation. The older

print medium rendered telegraphy as part of a set of mythic signifiers related to imperialism, national superiority, and Manifest Destiny, and the telephone (and later, as we shall see, broadcast radio) was likewise drawn into such a process.

First of all, telephony served as a national unifying device; by 1915, AT&T public relations advertising used a tactic that harkened back to the jingoistic journalism that had accompanied the establishment of the telegraph some seventy-five years earlier by using a map of the United States in the ad and phrases like "the telephone unites the nation"; the telephone was "the welder of the nation" that made "the continent a community" (Fischer 1992, 163). But here we find a difference. After the establishment of AT&T in 1885, the telephone was promoted largely as a business tool, and only later as a tool for the facilitation of household business (shopping, making appointments, attending to emergencies, etc.). But by the late 1920s—owing largely to the use-patterns (*consumer* use-patterns) that had developed largely beyond the control of AT&T and to the capital lure presented by the prospect of expansion into the general residential market—the telephone became increasingly conceptualized and marketed as a social facilitator (Fischer 1992, 41, 79). In this way, telephony marks a decided turn away from a producer orientation and toward consumerism. Returning to our example, then: the difference between the imagining of the United States in relation to telegraphy and what we find during the establishment of telephony is that the latter participates in what we might call the *commercial* imagining of the nation, a merger of the politics of consumerism and the older politics of nation-statism that, in a new user-based technological environment, in part defines popular modernity. In a series of advertisements for Cremo cigars, for instance, the image of the continental United States is conjured by clouds of cigar smoke, a weird conjoining of national identity and consumerist oral gratification, and thus an example of popular modernity par excellence (fig. 1). As for the relationship between technology and national consciousness, there is some evidence that the telephone may have initially strengthened local ties socially; but many experts (Kern, Westrum) see the telephone as "yet another of modernity's blows against local *Gemeinschaft*" (Fischer 1992, 23).

Perhaps more accurately, telephony reencoded this *Gemeinschaft* through a "decentralization of an urban lifespace into a matrix of intimate social networks" or "psychological neighborhoods" (Wurtzel and

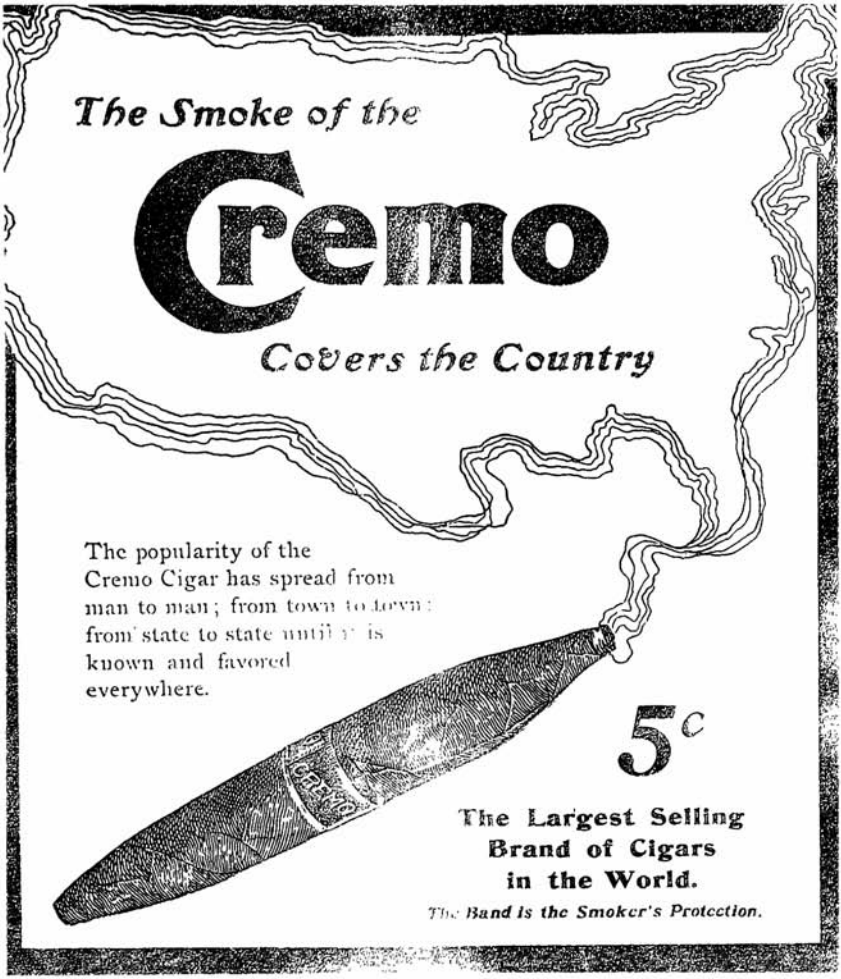

Fig. 1

The Commercial Imaging of the Nation. Advertisement for Cremo Cigars (1903), Smithsonian Institution American History Archives, Ayer Collection.

Turner 1977, 246; cf. Aronson 1971 and Ball 1968). While there is considerable range of interpretation here, it seems clear that one way or another, telephony created a new spatiophenomenal nexus. In other words, while the social and phenomenal impact of the telegraph was largely restricted to that which could be achieved through its secondary hypermediation, telephony (and the technologies that would follow) would have both a hypermediated *and* a nonmediated relationship with the everyday life-world and on concepts of self and the emplacement of self in an ambient spatial field. Because of its far greater integration with the everyday life-world and the habitat, telephony reencodes the phenomenology of spatialization in a way that initiates the "continuous sensory and spatial reorganization of social life" (Berland 1992, 43) that is perhaps popular modernity's most salient feature.

In relation to the individual subject, telephony (unlike its predecessor) is implicated in what Ihde, drawing on Heidegger, calls embodiment relations, "a symbiosis of artifact and user within a human action" (1990, 73). The telephone becomes an extension of self—in using it repeatedly, the human subject becomes increasingly unaware of its presence, thus making it not so much an intermediary between self and world, but a part of self in what is experienced, in the natural attitude, as unmediated experience. (Ihde uses the example of eyeglasses, which at first are experienced as an alien presence and later seem to become part of one's self.) In like fashion, the telephone becomes an extension of self/voice.

But this new kind of technological self-extension, a kind of cyborgization, while potentially empowering, can also have the opposite effect based on an opposing phenomenological condition, for it entails a situation in which others may encroach upon one's boundaries. These boundaries, based on both sensible and conceivable elements of the real environment, are defined phenomenally by a series of concentric (and egocentric) circles that provide a sense of enclosure and emplacement, and, as a derivative, protection and belonging. We can gather from Husserl that the midpoint and the outermost circle of this concentric system are, correspondingly, the human body (corporeality) and a much larger body, the Earth, "perceived in a primordial synthesis as a unity of mutually connected single experiences . . . yet, it is a body!") (1981, 222). But for our purposes in this immediate discussion, we are better occupied with the intermediate circles affected by

telephony—that is, the house or the immediate dwelling, followed by the community or city (Jager 1985, 215). Regarding the first of these two: our rooms become our wombs: in our personal habitats, Bachelard suggests, "memory and imagination remain associated" in a way that is indexed to our childhood and a feeling of "motionless security" (1969, 4–5).

The telephone is essentially an appendage to the habitat that is a potential threat to the womblike security or some other habitat (or fortress, if we think of the patriarchal image of the man's home as "castle"), because it gives the walls of the habitat a kind of porosity. As Fischer notes, a common complaint during the first two decades of telephony was that it "permitted intrusion into the domestic circle by solicitors, purveyors of inferior music, eavesdropping operators, and even wire-transmitted germs" (1992, 26). If we think of the two primary locations of the telephone in the home, the kitchen and the bedroom, we can see that this technology has been metaphorized in terms of the two sets of social relations it extends and modifies: the domestic (with its associations with the hearth) and the intimate. To demonstrate the social and cultural concerns that were generated in terms of the latter, we need only refer to the kind of prurient interest in the possibilities of "phone sex" that began within the first decade of commercial telephone with the "hello girls" who served as personal alarm clocks for male subscribers. Some of the commentary from the popular press of the late 1880s evidences a kind of connection between the telephone and sexualized relationships, capitalizing on the popular myth of a triangle between husband, wife, and telephone operator (Marvin 1998, 106–7). Strangely enough, telephony was already sexualized and hypermediated before it was electrified: du Moncel, in an early work on telephony, makes reference to a "string telephone" that, "if we may believe some travelers . . . has long been used in Spain for the correspondence of lovers" (1880, 12), and his book contains a wood print of two young courtiers using this device in an apparently amorous manner. Thus the relationship between communications technology and sexual behavior has a long tradition, from the lover's telephone to the various forms of anonymous sexual discourse made possible by the Internet (cf. Turkle 1995). Alexander Graham Bell, in the deposition he gave pursuant to the suit brought forward against him to annul his patents, mentioned that he had bought a device in Boston that had long been known as a "lovers' telegraph" (1908, 211).

Also, some of the earliest advertising played on this theme, such as a humorous set of cards created by a Canadian Bell company in which a protective matron cuts the telephone wire with a scissors to prevent two young lovers from using the phone for sweet talk: "There! That'll stop their nonsense!" she gloats triumphantly (Fischer 1992, 166). The telephone, to return to our "hello girls," thus seemed to provide transgressors with the ability to penetrate the physical perimeter of the domicile for the purposes of stealing the sexual property within.

The presence of these largely subliminal and intersubjective (psychological and phenomenological) concerns were energized and brought into full public consciousness much later in the Supreme Court case of *Olmstead v. U.S.* (1928), the first case to really probe the issue of domestic privacy vis-à-vis electronic technology. In this case, the Court, opting for a narrow interpretation, determined that the Constitution had not been violated when federal agents tapped Olmstead's telephone wire, since they did so without physically trespassing on his property (clearly, eighteenth-century notions of space were inadequate, and as is usually the case, the law lags behind technology). In a dissenting opinion, Justice Brandeis warned of the awesome power of technological espionage and concluded that the intent of the Constitution was to "protect Americans in their beliefs, their thoughts, their emotions, and their sensations. They conferred, as against the government, the right to be let alone" (qtd. in Long 1967, 23). If privacy is to some extent a modern invention related to the private experiences afforded by literacy and reflected in private reading habits, letter writing, and the keeping of diaries, then the breakdown of this privacy is a development stemming from the inception of electronically mediated popular modernity.

Not surprisingly, then, in the early controversy regarding the telephone we find a site of tension in the relations between the family and the notion of domestic privacy, the nation-state, the corporation, and technology. As we review its evolution, it also becomes evident that the modern (consumerist, atomized) family evolved from the family ideal formulated during the establishment of the bourgeois nation-state, a model that was disseminated across class lines and through a series of social changes. As Rupert Emerson noted, the nation is "the largest community that . . . commands . . . loyalty, overriding the claims both of the lesser communities within it and those that cut

across it or potentially enfold it within a still greater society" (1962, 95). According to this view, the family unit is an entity that the nation-state relies upon as a cell that reproduces national values and ensures that the need for workers, consumers, and military conscripts will be met. As industrialization and the centralization of labor eliminated the middle-class woman's role in commodity production, it was restructured along the lines, suggested by Coventry Patmore's poetic ode to marriage, of the "angel in the house" (cf. Auerbach 1992, 66); as Mosse puts it, the Victorian domestic ideology proposed that the home should be a "warm nest into which one could retreat from the pressures of the outside world," into a world of privacy, comfort, and the absence of conflict (1985, 18–19). And these post-laissez-faire interventions into the domestic sphere continued and continue to support this structure, for as Barbara Nelson noted, American family assistance, starting with the New Deal, was built on two tracks of assistance: male breadwinner and female wife/mother (qtd. in Coontz 1992, 138).

The cultural neurosis regarding the telephone as an intruder is the result of the way in which it can abrade this domestic ideology. In other words, the ideology of domesticity that was established by the bourgeoisie as a response to their own industrial revolution and furthermore encouraged, as we noted, through the privacy expectations generated by broad literacy, was now being interfered with, at least symbolically, by one of the technological products of that revolution. This perception regarding the telephone continued for quite some time; indeed, as late as the 1960s, when the size and power of AT&T was just beginning to come under attack, there was considerable public concern regarding the telephone as an invader of privacy, as reflected in a number of films, such as *If A Man Answers* (1962) and *I Saw What You Did* (1965) (Lubar 1993, 139–40). This sense of the telephone as an invader of the home (a charge that would later be directed at radio, television, and the Internet) is perhaps why ultimately the telephone became a "fossilized" technology; that is, in spite of the fact that the picture-phone has been possible since the 1960s, the public seems to have become resistant to any major changes in the telephone, and modems, cellular and "smart" (i.e., computer assisted) phones, and consumer services (like three-way calling) aside, very little has really changed regarding its use. Perhaps this is because there is no interest in extending the invasion of the habitat to the visual level.

The Screen/Space

In a number of fanciful illustrations that appeared in the popular press in the early 1880s and in which all the eventual uses of television, including distance education, entertainment, and even home shopping, were imaginatively presented (Barnouw 1975, 4–7), it is evident that the dream of television existed in the popular imagination long before such a device became technologically and commercially viable. At about the same time, Paul Nipkow began to design a "visual radio," and its perforated, rotating "Nipkow disk" would serve as the technological basis of television experiments for decades, until it was decisively replaced by the cathode ray tube. Of all modern technologies, television has had the longest technology lag, largely because it did not suggest an immediate political and military application (as did radio) and because its development and mass deployment was waylaid by two world wars and an intermediary period of economic depression.

With the saturation of American domestic space with television sets, a process that began in 1947 and was largely completed by 1955, a radically new form of spatiality became part of mass culture and consciousness. First of all, as with the radio before it (which will be discussed at length in the next chapter), television as a physical object, a household appliance in "real" domestic space, posed certain problems rooted in the basic contradiction between what Ihde calls the "framed space," which is, through the very act of framing, out of the ordinary (1996, 126), and, on the other hand, the mundanity of the domicile space. As Spigel points out (1990), when the television was first introduced into the domicile space there was an attempt to camouflage it with "hideaway" cabinets. Television came to occupy a designated space within the American domicile only when it was "incorporated within an overall furnishing scheme" and assumed a role as an ancestral shrine, as a place for "treasured objects, such as family photos and mementos" (Morley 1995, 182). But the spatial meaning of television, with its total "flow" (R. Williams 1974, 86–96) of moving images, always available and, unlike cinema, fully "domesticated" in the home setting (cf. Barthes 1980), goes considerably further than its object-status in domicile space: we need to consider the nexus of real and virtual spaces in reference to television's generic programming.