Imagining the Perfect School:  
Popular Representations of Internet Technology

In his February 6, 1997, State of the Union address, President Bill Clinton proclaimed that his number one priority for the next four years would be education. Clinton listed a number of traditional issues on which his administration would focus its attention, including standards, literacy, Head Start, school vouchers, building “character,” and school repair. Clinton’s last point, his educational finale, was his personal push to make the Internet accessible to all American school children. “We must bring the power of the Information Age into all our schools,” he said. “Last year, I challenged America to connect every classroom and library to the Internet by the year 2000, so that, for the first time in our history, children in the most isolated rural towns, the most comfortable suburbs, the poorest inner city schools, will have the same access to the same universe of knowledge.”

Clinton framed the Internet as a means for personal and cultural enlightenment, and as a new birthright of every American citizen. With a computer in every home as well, he said, the Internet would be a new town square, a teacher of all subjects, and a connection to all cultures. What Clinton didn’t say was how much corporate America stood to benefit from mass acceptance of Internet technology, and how crucial it was from a business perspective to affirmatively associate Internet use with schools. Clinton’s State of the Union remarks played a key role in an ideological campaign to associate the Internet with the positive rhetoric of education. Between 1995 and 1997, corporations such as AT&T, MCI, Intel, Microsoft, and WebTV (bought by Microsoft in mid-1997) mirrored that same Internet-as-education rhetoric
in several television advertisement campaigns. What follows is an analysis of these high-profile advertisements and some print equivalents, all which portrayed the Internet and its many costly computer accessories not just as modern conveniences, but as technological necessities with the lofty promise of exploration, enlightened education and greater democracy. This framing follows a familiar historical pattern of technological hype in the name of democratic education to successfully veil industrial goals.

**Framing Computers and The Internet**

Since the early 1980s, with the advent of personal computers and the Intel microprocessing chip, computer advertising on television has employed a long line of strategies to broaden the computer’s appeal and target both corporate and home buyers. Despite the different advertising strategies, though, the predominant goals of the early computer advertisements were to humanize the new microcomputers, stress their convenience, and build brand name recognition. As with the introduction of other home and office appliances such as microwave ovens, electric coffee makers, and photocopy machines, the familiar refrain of these early television commercials was that computers made life easier, less cluttered (even with an additional appliance) and simply better.

1983) and associate computers with a character “lovable to all kinds of people at all ages” (“Landmark,” 1996, p. A20). According to an IBM spokesperson in 1985, “When the PCs were introduced, computers seemed intimidating and cold. We wanted to show in a warm, charismatic way how they could make your life more productive” (Crichton, 1985, p. 55).

Lest IBM soften its brand image too much, Apple countered with the most famous computer ad of the 1980s, televised only once during the 1984 Super Bowl. The Orwellian commercial introduced the Macintosh, which would rescue humanity from Big Brother (who, it was later suggested, was then-industry leader IBM). More often, however, Apple advertising campaigns continued to stress human-friendly technology and convenience. A mid-1980s Apple television ad demonstrated the ease of the Apple II products by showing “a classroom with IIe computers on students’ desks and a teacher about to take her (more portable) IIc home overnight” (Crichton, 1985, p. 55). A 1987 Apple television ad featured the real-life story of a California teenager who refused to dissect a frog in biology class, and instead suggested that she “do” the dissection on an Apple computer. “That way, I can learn and the frog lives,” she says (Holden, 1987, p. 1345).

A more recent Apple campaign, begun in 1991, featured people answering the question “What’s on your Powerbook?” The ads demonstrated that the Powerbook laptops helped to organize everyday life and make it clutter-free. Moreover, they showed Powerbooks as portable, with users computing far from their desks in places like a mountain top or an airplane. As Advertising Age explained, the campaign “shunned the listing of technical specs, opting instead to show how this computer can make life easier” (“Landmark,” 1996, p. A24).
Other computer technology firms joined the pitch of brand awareness, convenience, and humanity. Chip manufacturer Intel’s goal was to make people actually care about the inside of the computer. Thus, in 1991, the company began its extremely successful “Intel Inside” branding campaign. The ads were modeled after the 1982 science fiction film Tron, and “took viewers on a sweeping, cockpit’s-eye view trip through the innards of a personal computer” (“Landmark,” 1996, p. A22). The commercials — made by filmmaker George Lucas’ Industrial Light and Magic special effects production house — transformed dull technical equipment into exciting conduits of speed and power that only Intel could provide. Logitech developed a campaign that “featured a series of improbably ‘human’ images that included fat men in beanies, a urinating baby boy and fully-clothed nuns splashing in the surf” to make its computer accessories seem more friendly (Lawler, 1996, p. A30). Perhaps the most blatant claim to humanity for computers has been Compaq’s “Has It Changed Your Life Yet?” campaign. One of the ad campaign’s main slogans states: “All Computers Have A Brain. Ours Have A Soul” (Lawler, p. A30).

The rise of the Internet in the early 1990s created a surge of interest in computers. E-mail, Usenet, and the graphics-rich network called the World Wide Web transformed computers from mainly stand-alone information and data processors to communication media. However, the first major television commercial campaigns about the Internet echoed the tone of earlier computer advertisements in stressing user-friendliness and convenience. One of the earliest of these campaigns was Network MCI’s 1994 12-spot series about a fictitious New York publishing house called Gramercy Press. The commercials packaged the Internet in terms of its practical applications: a young, Internet-savvy receptionist constantly “saved the
day” in the high-pressure “human” world of publishing (“Landmark,” 1996, p. A24). The theme of younger, technologically experienced employees—usually female—who turned to computers in order to solve pressing problems for their “old-fashioned” bosses was a common marketing motif in 1994.

**Beyond Space: Computers and the Internet as the (Next) Final Frontier**

By the end of 1994, television ads began to position computers and the Internet beyond a mere communications tool and convenience appliance and into a much larger, more potent role. Moreover, the placement of computer/Internet ads in the television schedule broadened. Formerly scheduled during mostly morning and weekend news programs, computer technology ads were now being placed in a wide range of entertainment programs, including sporting events and the top prime time shows like *The X-Files, ER,* and *Coach.* The number of computer-related spots doubled for prime-time shows between 1992 and 1994, and more than tripled for National Football League telecasts during the same period (Kim, 1995). A media director for a California ad agency that handles high-tech clients explained the demographic shift: “The earliest adopters in the home market were probably those who worked at home. Now we’re finding that the whole family is using computers. We target moms, dads, even kids as influencers. There are 3-year-olds using computers now” (Kim, 1995, p. S10).

In industry terms, the Internet was the much-awaited “Killer App” — a computer application that could capture the interest of more than just the expected users, and sell computer technology to a much wider audience. Advertisements framed the Internet-enhanced computer as the medium for exploring (and conquering) a new frontier. The ads both adopted
and advanced political discourse to create a nationwide technological mobilization for a new socio-economic regime that has been alternately called the Information Age or Information Society (see, for example, Rifkin, 1995).

Key to this technological mobilization is the discourse of the frontier. According to historian Patricia Nelson Limerick, the notion of the frontier has incredible flexibility and persistence in American culture:

> It is virtually the flypaper of our mental world; it attaches itself to everything — healthful diets, space shuttles, civil rights campaigns, heart transplants, industrial product development, musical innovations. Packed full of nonsense and goofiness, jammed with nationalistic self-congratulation and toxic ethnocentrism, the image of the frontier is nonetheless universally recognized, and laden with positive associations. (1994, p. 94)

Computers and the Internet are just the latest technologies bearing the mantle of the frontier to further economic and political interests. In the past century, the telegraph, telephone, radio, and television industries, as well as the space program employed the culturally positive and heroic concept of “frontier” to mobilize the American public to support and adopt their technological programs. Advertisements for television in the early 1950s positioned television sets in front of scenic backdrops to convey the exploratory potential of TV, which brought the world to the home. For example, in 1953, Emerson TV placed an ad in publications like *Better Homes and Gardens* that showed a television set with a picture of New York City on its screen in front of a backdrop displaying the planets (Spigel, 1992, p. 9). When the Space Age was touted as the next frontier (one that could be fortuitously explored through television sets), the spectacle of American technology, according to cultural historian Michael Smith
Fabos/Martin (1983), was similarly portrayed by its promoters as “benign, elegant, beyond the earthbound concerns of military and diplomatic strategy” (p. 178).

In these successful campaigns, the discourse of frontierism was expanded from goofy, self-indulgent exploration to include the larger benefits of education. Linking frontier travel to educational progress was a way to give technology an air of humanistic enlightenment and nationalistic importance. It was also a way to successfully veil the ulterior economic and political motives of technological development. Beyond planetary adventure, the television was described as a “world university”, and its use as an educational tool was pushed in homes and schools. “Tomorrow’s children, through the great new medium of Television, will be enrolled in a world university before they leave their cradles” an advertisement from the 1950s proclaimed (Rich, 1997). Corresponding to positive educational rhetoric came real government and corporate investment: In 1962 President Kennedy issued $32 million towards classroom television development and “by 1971, over $100 million had been spent by both public and private sources” (Cuban, 1986, p. 28).

In a similar manner, space was heralded as a sacred journey for the purpose of enlightenment. In light of the Sputnik challenge, when Americans were convinced of their technological and educational inferiority to the Soviets, enormous resources were poured into science education — $1 billion in 1958 alone (Besser, 1993 p. 47) — which in turn helped legitimize the huge amount of tax revenue resources needed to build and maintain NASA and the vast scientific, military, aeronautic, and technological industries of the space age (Smith, 1983, p. 193). The launching of space crafts and satellites had been made possible only with billions of public funds; nevertheless, private corporations were often the behind-the-scenes
beneficiaries. For example, the profits from the first communication satellite, Telstar I, would be enriching AT&T, not the public treasury. As Barnouw (1990) notes, “That public investments should thus be channeled into a private preserve agitated some observers, although it was hardly discussed on television” (pp. 309-310).

By 1995, the Internet began to lay claim to the title of the “next” American frontier. Television ads about the Internet at that time began to frame the computer and its accompanying software as vehicles for exploration and a means for knowledge — sometimes omniscient knowledge. Like the exploratory technologies before it, Internet travel also began to be associated with the educational possibilities for children, the next generation. A 1995 Network MCI ad campaign starring child actress Anna Paquin suggests that its computer network offers access to the penultimate road of exploration and, as such, is a consequential ticket to child sagacity. In the ad, Paquin is wearing vintage chic velvet, a floppy Victorianesque hat, and is hued in gentle, enchanting sepia tones. She stands on a rock by the sea, and through the magic of editing seamlessly “hops” from one rock to another (another version shows her in a snowy forest). Because of her precisely measured New Zealand accent, Paquin sounds “smart.” She was, in fact, awarded a Best Supporting Actress Oscar for her work in The Piano and oozes the brilliance and precocity of her winning role. “There will be a road,” she says, hopping from one rock to the next. “It will not connect two points. It will connect all points. Its speed will be the speed of light. It will not go from here to there. There will be no there. We will all only be here.”

As MCI’s designated 1995 spokesperson, Paquin is the child-sage at the entrance to a sort of infinity of information, or, as Internet marketers (including President Clinton) prefer to
describe it, “a universe of knowledge.” This frontier is internal, rather than external; wide open, virgin territory for anyone — especially children — to explore directly, rather than the mere vicarious exploration in which Americans experienced space travel. Paquin’s old-fashioned, artsy outfit mixed with her futuristic know-how is a clever way to mollify the inhuman aspects of technology. She is surrounded by nature, nowhere near a computer, and discusses technology in metaphorical terms as if she’s recounting a childhood riddle. While her presentation conveys the technological mysticism of ethernet cables and html files, the road metaphor suggests a tangible, user-friendly route for exploration. The reassuring expertise of a female child (technology is usually associated with grown men) is also a tacit nod to the ease of Internet and computer access, and appeals to public doubts about technological determinism and corporate and political profits.

Even as the Internet has replaced outer space as a site for American exploration and transcending knowledge, images of space, planets and galactic travel continue to be a prevalent motif for promoting the Internet, just as planets came to represent a symbol of exploratory possibility in the marketing of television. Another Network MCI television ad, aired in 1997 on CNN, focuses on space, children and education. It starts with warm, lush, classical music and opens on a long shot of an astronaut floating happily in a space capsule. “Hello America!” the astronaut says with a Russian accent. A tracking shot sweeps by white fourth graders behind a row of monitors in an airy, sunny classroom. The students are looking at their monitors while interacting with each other. One kid points to the screen. “Ask him what’s it like floating in space,” says the child’s voice over. “What?” another kid replies. A low chatter with words like “cool” runs throughout the ad. A child’s hands (in close up) type
quickly. The astronaut slowly reaches out and grabs a camera (in foreground) that floats
toward him. We hear more questions from the entranced students: “Do you ever get a chance
to sleep?” As the shot cuts to a close up of a cursor arrow clicking “send” on the computer
screen [text below the cursor reads “To: Mission Control (Internet).”] a Lauren Bacall-like
voice says “It used to be that we just launched rockets into space.” A white girl looking at the
screen appears transfixed. The astronaut punches a message into his computer. Then a
student’s shoe lace floats upwards, followed by a black girl’s pigtails, a white boy’s frog
(coming out of a desk), and an Asian boy’s pencil. The children appear captivated and
amazed. Meanwhile we hear snippets of the kids’ bursting curiosity: “what’s the scariest
moment...what about coming home when the fuel’s all gone?” The voiceover returns:
“Today, through distance learning, MCI can launch entire schools.” The lush music
incorporates a plinky, happy xylophone. Kids — along with a globe, a book a trumpet and a
lunch box — float happily above their desks. A white boy (still seated) pokes at transparent
blobs floating out of a bottle. Finally, a black screen with white text (ending with an e-mail
smiley face) reads “Is this a great time, or what?:) MCI.”

By returning to familiar yet symbolically updated images of the space race, and by
portraying the Internet as an important channel of scientific exploits, the ad makes computer
technology the kindred spirit of NASA’s technological achievements. The ad also plays on
nostalgia by invoking the Sputnik challenge, when American culture (including schools) was
mobilized in the name of national prestige, the drama of space exploration, and educational
benefits. With a Russian astronaut in this space nostalgia, the MCI ad also reminds us —
especially target-audience baby boomers — of the space race’s “happy” ending in which
America remained dominant. The baby boomer generation was treated in school with live television viewings of Apollo lift-offs and moon walks. Now, the ad suggests, the current generation of school children can be “launched” into space as well, with an even more “virtual” space experience. The children in the ad float over their desks in a highly dramatized representation of space and scientific enlightenment. The boy contemplating the transparent blobs at the end of the ad could very well become, due to his engaging exploration of chemical matter, the next Nobel Prize winner for science. The technology in this ad is presented in a humanizing, reassuring way that points to the learning enabled by computer/Internet technology rather than to the economic benefits accrued to the many corporations that hope to put a networked computer on every school desk.

**The Internet and the Educational Reform Movement**

The rise of small computers in the corporate community during the 1980s led to increasing pressure for practical computer instruction in schools to ensure that students could adapt to the changing demands of the American work place. The mass marketing of the personal computer as a business tool in the 1980s also corresponded with a number of reports on the “crisis” in American education, which called for a “back-to-basics” pedagogical emphasis. Ironically, “back-to-basics” for many included not only an emphasis on reading, writing and arithmetic but also a new reliance on computer technology, with a call for modern computer equipment and computer curriculum in schools (Besser, 1993, p. 51) The most widely circulated educational reform report, *A Nation at Risk*, which was spearheaded under the Reagan Administration and completed in 1983, called for a technological overhaul. “Our
once unchallenged pre-eminence in commerce, science, and technological innovation,” it read, “is being overtaken by competitors throughout the world” (Education Commission, 1983).

Along with the back-to-basics model, which was generally supported by moderate and conservative politicians and education officials, computers began to be allied with other, more progressive areas of educational reform which focused on the cognitive aspects of education. Many educators began to view computers as a sanctioned way to test their theories of “interactive” and “collaborative” learning practices, theories which had become repopularized in the 1970s as ways to enhance knowledge retention and classroom participation. Interactive learning involves “active,” hands-on, individualized learning rather than “passive,” desk-bound learning (that invokes now-derogatory images of teachers lecturing at the chalkboard). Collaborative learning stresses group participation, de-emphasizes a teacher’s authority, and organizes education around a student’s personal curiosity and the collective curiosity of a student-centered group. In this framework, teaching students “how” to learn is preferred over teaching students “what” to learn. By the mid-1980s, advertisements in magazines such as Classroom Computing began to sell computers in terms of these educational trends. In ads for classroom management systems that connected a teacher’s computer with the computers on students’ desks, for example, computers were marketed as going beyond convenience and practicality and shown to improve education by “stressing pertinent educational issues such as individualized instruction, classroom structure, individually paced instruction, behavior management and the productive use of classroom time” (Gribble, Gamsky & Muffoletto, 1985, p. 11). Computers were thus not only classroom tools that fostered essential skills for the business world; they had begun to be explicitly linked to making kids smarter. Keeping in
line with the corporate and government backing of computers in school, educational research that had anything to do with computers became a means for securing funding for educators’ personal research agendas, and came to be regarded as “visionary” in higher education circles (Besser, 1993, p. 65-6).

With the development of Internet and interactive multimedia technology, the excitement about computer-enhanced education and its theoretical connections to cognition has increased. Internet technology has been understood as highly interactive. Kids scroll up and down web pages, avidly select paths of knowledge, and critically analyze the information in what has come to be considered a positive, two-way learning process that elevates students into a new zone of knowing. As an “interactive” learning tool, students can engage in computer activity in groups (as the teacher hovers and facilitates) or work alone at personal terminals in the “interactive” Internet social environment. Moreover, students often know as much or more about computers and Internet travel as teachers do, thus minimizing a teacher’s top-down authority, and creating a more collaborative student-teacher, and student-student learning environment. As explained by learning research scientist Janet Schofield (1995):

Computers are interactive tools that can be used to accomplish extremely varied purposes, from editing text, to providing simulations of dangerous or prohibitively expensive laboratory experiments, to putting students in direct contact with others from around the world, to facilitating ‘virtual field trips’ to far off locales. In contrast, film strips and television shows are very static, in the sense of being set presentations that are there for students to absorb. Thus, even though they are likely to provide much richer visual and auditory information than a teacher’s lecture, they are not interactive as computers are (p. 212).

In this list of priorities, the interactive computer/Internet is the best teaching tool, then comes television, film strips and finally, the teacher. By the mid-1990s, selling computers as education
reform had moved from solely teacher-oriented trade publications to nationally televised advertising campaigns, taking the rhetoric of computer-enhanced learning mainstream.

Visualizing Internet Interactivity

In the Network MCI commercial discussed earlier, students communicate with a Russian astronaut, type messages and control options with a mouse, while being visibly captivated by the screen. Such portrayals of children both enchanted by and adeptly handling computers have become an important symbol of scholastic success and community progress in America. Corporate videos and brochures produced by local chambers of commerce, for instance, now inevitably include shots of children engaged with computers to proudly indicate a “high-caliber” school system in their community. Showing a child reading an “old-fashioned” book would communicate a passive, under-funded learning experience; showing a student watching television — once embraced as a “world university” — would be a travesty of couch-potato proportions. Presumably, the younger the child-with-computer in the promotional materials or advertisement, the better. One recent computer ad in a magazine had a caption that read “1st step towards Rhodes Scholarship” and showed a father holding an infant who touches a computer keyboard (disturbingly, mothers aren’t portrayed in parallel arrangements). This baby, we are led to imagine, has an edge in life. Another ad portrays a young man who clearly doesn’t. He sloppily trudges off to college and returns home without having had the “proper” access to computers. Still plodding, still sloppy and with no computer skills, this 22-year-old, as the ad presumes, will be a failure for life (Besser, 1993, p. 61).
To dramatize this process of cognition through interactivity, television ads tend to focus on students’ hands as they click on the mouse, the screen that is constantly (actively!) being modified by the mouse arrow (an extension of a student’s curiosity), and frequent close ups of student faces as they absorb the magnitude of their choices. A 1997 Microsoft commercial for Internet-related software never leaves the computer screen and takes a “user’s” point of view to illustrate interactivity — as a TV screen is uniquely suited to doing. A mouse arrow clicks from image to image. At one point the arrow moves to a computer menu category list and considers the selection: mathematics, physics, chemistry, earth science, paleontology, and astronomy. The arrow chooses — not surprisingly — astronomy, linking technology yet again to space travel/enlightenment.

Another advertisement for the Intel computer processing chip (1996) portrays an elementary-aged girl researching a book report on jazz via the Internet. She “interacts” so completely with the audio and video files supported by the computer chip that she is transported into the glowing circuitry of the chip, while expertly playing a jazz riff on the saxophone. An AT&T World Net Service commercial (1997) depicts the creative and interactive capacities unleashed by two flirting high school sweethearts who, in the wee hours of the night, employ advanced multimedia software to cut and paste digital love messages and send them back and forth from their home computers. AT&T’s service makes teenage love innocent, safe, and educational, thus solving a multitude of parental concerns. Work on the computer, despite its vigorous disciplines and requirements, is seen as liberatory.

Visualizing Internet Collaboration
As computers and Internet software are framed in television ads as exploratory tools and extensions of students’ imagination, children in these same ads are pictured as precocious experts of Internet travel. The Internet is not only used by precocious children, we are led to believe it creates precocious children. Not surprisingly, most television ads portraying students using the Web at school have no teachers in the classrooms. The students are represented as self-motivated learners all on their own. Of course, depicting the computer/Internet instead of the teacher as the center of the learning process — a popular scenario in Internet ads — is good business for computer companies and Internet servers. This image of teacherless classrooms also conveniently creates a mechanized individual instruction solution for school districts downsizing their human teaching staff, often in order to buy even more computers (see Oppenheimer, 1997).

In one Internet ad that does depict a teacher, the shot of the instructor lasts only about two seconds, with the teacher standing in the middle of an elementary class and saying part of “Is this a good time or what?”, Network MCI’s 1997 slogan. Consequently, while the teacher becomes a “guide at the side” and is removed from any position of authority, and while children become inquisitive, collaborative “experts,” the ultimate educational expertise in this misleading arrangement is actually accorded to whatever is on the Internet computer screen. Furthermore, images of efficient collaboration rarely materialize in real computer classrooms, according to Oppenheimer (1997). “During my school visits children tended to get quite possessive about the mouse and the keyboard,” he writes, “resulting in frustration and noisy disputes more often than collaboration” (p. 62).
The American Rhetoric of Greater Democracy

As we have seen, the Internet has been presented in 1995-1997 television ads as a new frontier and as an answer to progressive educational reform. In conjunction with these portrayals, the Internet is also marketed as a social tool to usher in greater democracy. Again, images of education are key in these portrayals, because American democracy as a social mission has been allied — at least in public discourse — with the institution of public schools.

Despite Michael Apple’s (and others’) observations that “schools are not there to stimulate class mobility, but basically act as sorting devices” (1995, p. 39), the school has long been hailed as a place of socialization where practices of good citizenship and democracy are upheld. “Public educational institutions,” Spring (1972) observes, “have played a leading role in campaigns to end urban poverty and crime, Americanize foreigners, heal the wounds of race relations, and rejuvenate an often sagging democratic spirit” (p. xi). Educational technology has been promoted in the same way. When television was being sold for classroom use, it was said to “offer the soundest basis for world peace that has yet been presented” (Kadi, 1995, p. 57). Likewise, the Internet is framed as a social panacea, offering access across all borders and solving racial, class, gender, age and disability prejudices in a snap; people no longer have to interact face-to-face, so identity differences can be masked.

Democracy is shown to be a positive consequence of Internet use on two levels. First, by exploring the great “democratic” moments in American history through the audio/visual applications available through the Web, these moments “come to life.” A 1997 Microsoft ad for Internet-related software comes fully equipped with democratic imagery. Set to “What a Wonderful World” sung by a soft, soothing female voice, the ad begins with a text screen that
reads “Microsoft software helps you learn.” The ad never leaves the computer screen as the mouse arrow, presumably guided by the computer user/ad viewer, interactively clicks on image after image of democratic content — American style. The visuals in the ad (sometimes multiplying or changing sizes, sometimes appearing as video clips, but always moving) show German protests at the Berlin Wall; the Berlin Wall being dismantled (at this point the audio of Martin Luther King’s “I have a dream” speech overtakes the music: “I have a dream my poor little children shall not be judged by the color of their skin but by the content of their character”); a photo of Mao; video of Martin Luther King giving a speech; a Martin Luther King photo with accompanying text; Ann Frank; and Picasso’s painting, “The White Dove,” which slowly dissolves to a film image of a white dove flapping upward to indicate peace. The commercial also shows planets, accompanied by audio from man’s first moon walk, and diagrams of a heart, both representing technological mastery and frontierism. The idea of incorporating “profound” historical moments and figureheads in American and world history in this and other commercials is to demonstrate the victorious fight for the preservation of American democratic ideals. As the ad suggests, a student can “visit” all these web sites and learn the nature of American democracy in color, up close and in depth.

The second level in which the Internet is shown to evoke democracy is through the portrayal of the Web as an openly accessible, non-judgmental and truly equal social environment. The 1997 Network MCI commercial, which debuted during the 1997 Superbowl telecast, is a 30-second rush of beautifully visualized people, symbolic settings and stylized talking heads. The emphasis is on uncommonly articulate children, dignified elderly, friendly interracial interactions, and unfettered social accessibility. Various voices, mostly children and
older folks, narrate the copy: “There are no genders. There is no age. There are no
infirmities. There are only minds. Utopia? No. (No.) The Internet, where minds, doors and
lives open up. Is this a great time or what?:)” The voices often overlap and the words flash
by quickly on computer screens and on green chalkboards, as children cross them out. It’s
important to note that children, who are often delivering segments of the voiceover, are
positioned in schools, by chalkboards and alone in library corridors. Teachers, as non-experts,
are nowhere to be found.

Another means of attaining democracy in education, it has been asserted, is through the
idea of “individualized instruction,” which, as noted earlier, is an element of Internet use that’s
consistently celebrated by education reformers. Spring explains the democratic goal of such
instruction:

. . . individualization meant using individual methods to assure that every student
achieved the same goal. This definition was used in reference to both character training
and academic subjects. If one wanted children to be thrifty or learn algebra, one used
different methods with each child. Somehow this form of individualization was to be
democratic. (Spring, 1972, p. 164)

The idea then, of encouraging students to chart their own individualized paths of learning on
the computer is therefore a high measure of democratic practice, and is duly reflected in
Internet ads as one more positive benefit of Internet use.

**The Computer: A Perfect School**

The computer industry and a coterie of technology enthusiasts have succeeded in
portraying technology as exploratory and humane, progressively educational, and democratic,
so that a student’s every school-based need is completely fulfilled by the Internet and other
interactive software applications. By drawing on images of space, educational reform, and democracy, Internet portrayals have, in fact, managed to combine two often competing visions of the perfect school. One is the little red school house with its small class size and a kind, caring teacher who focuses on “the basics” and enforces a strong sense of social and democratic values. The other is the ever-progressive classroom where the latest, most efficient and mesmerizing multimedia and scientific technology takes students to the limits of their imagination. Students in this classroom are so responsive to and awed by the technology that learning becomes fun (“Is this a great time, or what?”) and innately rewarding. By satisfying both visions through the magic of computers, the overall message becomes one of urgency: the computer solves all education (and other) problems, and those schools and homes without computers are creating dire disadvantages for children and for the future of American society.

“Implicit in marketing [computers] as tools of progress,” Besser (1993) writes, “is the notion that without computers we, our children, and our country will fall behind others who are keeping up with progress and that we will be worse off if others are ‘ahead’ of us” (p. 61). Accordingly, one school district in Connecticut spent $80,000 in 1997 (the most sizable chunk of its annual budget) to buy laptops for its 36 seventh grade students; eighth grade students will get computers in 1998. “It helps keep us organized,” one 12-year-old student said. “All our papers are in one place” (“School,” 1997). Another school district in Washington will spend $4 million over three years for a web site, its programming, hardware and teacher training (“Student’s,” 1997). The prevailing attitude in these instances is the more technology and the more ways teachers can apply the Internet across the curriculum, the better.
The advocacy of the computer as an interactive learning tool no longer dependent on a teacher’s expertise corresponds with discussion and research during the past two decades about the entire purpose of traditional schooling. Education technology advocate Seymour Papert of MIT, a favorite source for the news media, prophesizes an educational format that is entirely computer-driven:

I think the computer will blow up the school. That is, the school defined as something where there are classes. Teachers running exams, people structured in groups by age, following a curriculum — all of that. The whole system is based on a set of structural concepts that are incompatible with the presence of the computer. (Cuban, 1986, p. 72)

Dierker (1995) frames children in this new form of education as the consumers of intellectual factoids, and envisions home learning environments as libraries of ready-to-access information:

The prospect for almost instant gratification of the familiar and natural curiosities of children emerges. The inevitable ‘why is the sky blue’ type of questions are not put off for the trip to the library that likely never takes place, or finessed by the ‘ask your teacher tomorrow’ replies. Instead, they are answered with the push of a button, essentially, by the child or parent, starting at any age, and ending at any age. (p. 231)

Former Assistant Secretary of Education and educational historian Diane Ravitch also embraces a new educational environment where both teachers and schools are irrelevant:

Children and adults will be able to dial up a program on their home television to learn whatever they want to know, at their own convenience. If Little Eva cannot sleep, she can learn algebra instead. At her home-learning station, she will tune in to a series of interesting problems that are presented in an interactive medium, much like video games . . . Young John may decide that he wants to learn the history of modern Japan, which he can do by dialing up the greatest authorities and teachers on the subject, who will not only use dazzling graphs and illustrations, but will narrate a historical video that excites his curiosity and imagination. (Postman, 1995, p. 377)

Corresponding to this enthusiastic rhetoric are television ads depicting groups of children in front of their “home learning centers,” oohing and ahhing as their curiosity
transports them to higher levels of cognition. One 1996 advertisement for WebTV Network Inc. (acquired by Microsoft in 1997) shows three young (white) boys positioned in front of a huge living room monitor, which puts forth a blue halo of light, the “light of learning.” Learning has thus become romanticized as an intense, intimate parlay with technology, where technology conveniently solves a child’s every scholastic and communicative need, and is always portrayed as wholesome.

The reality behind these images is that most kids — and adults — don’t have scholastic desires without being prodded into them, and would often rather play video games than research historical questions. Another missing element in these home learning portrayals are parents. Who will supervise these kids in the ideal home school? The pristine image of a student quietly compartmentalized in front of a home learning center where learning becomes whatever a student determines it to be (or whatever holds a student’s attention on the Web) is a rather masterful depiction of ultimate corporate control and human isolation, a redefinition of the computer “user” as “consumer.” The overall scenario sounds quite like Foucault’s description of panopticism, a system of optimal surveillance whereby people are self-monitored to behave according to the desires of the society’s dominant social forces through a whole set of techniques and institutions for measuring, supervising and correcting the abnormal (see Foucault, 1977, pp. 195-228).

Although some consider the World Wide Web and computer education software the perfect educational environment, they have become giant venues for corporate advertising. Corporate curricular control and school-based advertising have largely been at the margins of schools, but have made increasing inroads during the past decade, such as the much-debated
Channel One (see Jacobson & Mazur, 1995). The Internet as teacher and curriculum represents an enormous leap, with the potential for millions of children — the most easily influenced audience — gazing into the screens carefully fashioned as the icons of higher learning, but with innumerable corporate ads. As media historian Robert McChesney (1997) notes, “the Internet has already turned dramatically away from the noncommercial, nonprofit, independent and open public sphere that it promised to be just a few years ago. The media, telecommunications and computer giants are doing everything in their power to see that the Internet is drawn into their empires” (p. 23).

While parents and schools can now purchase plenty of software programs that promise to screen out pornographic and other illicit elements from young eyes affixed on the Web (the Internet’s answer to TV’s V-chip), this kind of software just becomes another computer commodity that negates a deeper discussion about the quality of Internet content. The parental and school concerns about Internet pornography and bomb building miss the ethical questions of subjecting students to so many advertisements, and allowing corporations to collect marketing information from children who use the Net (see Shapiro, 1997).

Invasive strategic marketing program devices called “cookies” began to frequently pop up on numerous web browser screens by 1997, asking users at just about every new page if they would like to accept a “cookie.” The highlighted “yes” (the suggested correct choice) sets the cookie, allowing the owner of the web site to collect — sometimes for more than 10 years — “universe of knowledge.” (The news media are themselves major players in the Internet, too, with nearly all broadcasters and print outlets now pushing to increase audiences for their web sites.) As first proven by Apple Computers in the 1980s, computer donations
are actually a sly way to build up brand loyalty and provide an ongoing marketplace for future software upgrades. “School is...the ideal time to influence attitudes, build loyalties, introduce new products, test market, promote sampling and trialning prizes. The ease of the Internet also makes plagiarism convenient. By typing in “term papers” on any Internet search engine, students have been accessing sites with pre-written papers on virtually any topic, which they download (sometimes for a modest fee) and pass off as their own work (Applebome, 1997b, p.1).

While President Clinton, who has called himself the Education President, continues the cry for educational technology so all American children can have access to “the universe of knowledge,” politicians — Clinton included — and the computer industry are making deals. In 1996, 44 Governors, each bringing a corporate leader from their state, gathered for a two-day meeting at the IBM corporate conference center in Palisades, NY with two agenda items, according to the New York Times: “moving from the broad goals outlined in 1989 to specific standards and bringing better computers and technology into classrooms” (Applebome, 1997a, p. B10). The noble-sounding educational goals fail to indicate an enormously lucrative market: between $40 and $100 billion dollars over five years to fund Clinton’s program to connect schools to the Internet (Oppenheimer, 1997).

An influential computer industry is also continually lobbying Congress to pass tax incentives to companies donating computers to schools. Donations generate immediate positive publicity for computer companies, who the news media most often portray as entirely philanthropic — after all, computers allow children to explore the new frontier, the "universe of knowledge." (The news media are themselves major players in the Internet, too,
with nearly all broadcasters and print outlets now pushing to increase audiences for their websites.) As first proven by Apple Computers in the 1980s, computer donations are actually a sly way to build up brand loyalty and provide an ongoing marketplace for future software upgrades. “School is...the ideal time to influence attitudes, build loyalties, introduce new products, test market, promote sampling and trial usage and — above all — to generate immediate sales,” Lifetime LearningSystems, a company that helps corporate clients place promotional materials in schools, states in a brochure (Bowen, 1995, p. 5).

Oftentimes, however, teachers don’t buy into the corporate hype. Technology can be glamorous, but teachers have also found that it can break down, be inflexible and overly structured, or display programs with weak, uninspired content. Technology promoters have consequently been frustrated when teachers don’t use the product as regularly as its producers and backers wished. “Surveys would document teacher use of the particular tool as disappointingly infrequent,” Cuban writes. “Such surveys would unleash mild to harsh criticism of administrators who left costly machines in closets to gather cobwebs, or stinging rebukes of narrow-minded, stubborn teachers reluctant to use learning tools that studies had shown to be academically effective”(p. 5). The teacher criticism is part of a cyclical scenario. A new technology device is adopted, but underused, and then the teacher, not the machine, is blamed. Technology advocates then only acknowledge the device’s shortcomings (and the likely reasons for its low rate of use in the classroom) once a new breakthrough is developed to replace it — much in the same way that advertisements for a “new, improved” detergent don’t tell us that the earlier detergent wasn’t very good.

**Conclusion**
Now that the Internet is touted as the new tool on the educational horizon, it’s permissible to acknowledge that every other technological apparatus brought into the classroom and hailed as an exploratory/enlightenment medium has been largely ineffectual. The Victrola, film and radio were outpaced by television (Cuban, 1986, p. 5-9). Television didn’t bring world peace or democracy to the classroom, or become “the third educator,” as was promised. The NASA space program, still dutifully reported in the news reports on space shuttle flights and now featured in its own web site, no longer holds the public’s imagination as it did in the Cold War era, even with the recent exploration of Mars. (In fact, news coverage of the July 4, 1997 landing of the automated Pathfinder mission on Mars was oftentimes more about the novelty of NASA computer technology and heavy use of the Pathfinder web site than Mars geology.) Despite occasional nods to education, both the television industry and NASA are organized around serving corporate, not educational interests. From this history, we should learn to rigorously investigate claims that new technologies are designed first and foremost to aid our children.

Of course, there can be legitimate instructional benefits using computers and the Internet in the classroom, but mainly for junior high and high school students. Describing the writing improvement possibilities from web page publishing, one director of information technology in a Washington school district said, “they know they’re going to be on the Web, that makes them spell better” (“Students,” 1997). One project, for instance, entailed students across the country tracking the migratory patterns of birds and sharing their findings on the Web (Oppenheimer, p. 61). Individual teachers have sought support groups and engaged in
“chat room” discussions on the Internet to share project ideas. (There are also a host of Internet lesson plan books and software now available for purchase).

But, another system of motivations encourages teachers to use computer applications in the classroom regardless of curricular purpose or need. According to Cuban (1986), “teachers who support computer technology experience a sense of competency and control, and also increase their path of upward mobility because school bureaucracy rewards computer-literate teachers” (p.167). Ultimately, though, the “universe of knowledge” contains the commercial contradictions that will lead it down the same path as earlier magical technologies. The image of the student in front of the computer monitor may become associated with intellectual inactivity as soon as the next educational technology tool comes along to replace it. Like the latest in high-tech exercise equipment that promises fast and easy results but ends up collecting dust under beds, computers and Internet technology are likely to generate great investment activity but, in most cases, diminished returns.

The late education philosopher Paolo Freire recognized the influence that a society’s most powerful class can have over the education system. “It is not systematic education which somehow molds society,” Freire said, “but, on the contrary, society which, according to its particular structure, shapes education in relation to the ends and interests of those who control the power in that society” (Pace, 1997). Thus, in a corporate-led consumer society, we should expect a continuing push for the adoption of “exciting” technology, courtesy of giant corporations like AT&T, MCI, Intel, Microsoft, and WebTV.

The best hope for counteracting corporate America’s huge voice in the educational technology movement is to create a civic debate — one which calls on the experiences of our
best teachers and others who understand the checkered history of educational technology in schools. Articles such as Todd Oppenheimer’s “The Computer Delusion” in the July 1997 issue of The Atlantic Monthly have begun to draw public attention to the shortcomings of computers as education. In subsequent debates — computers and the Internet will eventually be replaced by “the next big thing” — teachers and citizens should also fortify themselves by articulating enduring goals for education. Critical thinking, creative insight, and language skills arise from the most basic of all “technologies” — face-to-face human communication.
WORKS CITED


