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**Children's Media Culture in the New Millennium:
Mapping the Digital Landscape
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Abstract

A new “children’s digital media culture” is swiftly moving into place on the Internet. In this article, the author describes the technological, demographic, and market forces shaping this new digital media culture and the rich array of Web sites being created for children and teens. Many nonprofit organizations, museums, educational institutions, and government agencies are playing a significant role in developing online content for children, offering them opportunities to explore the world, form communities with other children, and create their own works of art and literature. For the most part, however, the heavily promoted commercial sites, sponsored mainly by media conglomerates and toy companies, are overshadowing the educational sites. Because of the unique interactive features of the Internet, companies are able to integrate advertising and Web site content to promote “brand awareness” and “brand loyalty” among children, encouraging them to become consumers beginning at a very early age.

The possibility that a child’s exploration on the Internet might lead to inappropriate content, aggressive advertising, or even dangerous contact with strangers has given rise to a number of efforts to create “safe zones” for children—that is, places in cyberspace where children can be protected from both marketers and predators. Federal legislation now requires parental permission before commercial Web sites can collect personal information from children under age 13. Several companies offer filtering, blocking, and monitoring software to safeguard children from harmful content or predators. Generally lacking in debates concerning children’s use of the Internet, however, is a more proactive definition of quality—one that would help ensure the creation and maintenance of Web sites that enhance children’s learning and development and not merely keep them from harm. In the concluding section of this article, the author recommends actions to promote development of a quality media culture that would help children become good citizens as well as responsible consumers.

I

In its 1993 report *Agenda for Action*, the Clinton administration presented a vision of a twenty-first century world transformed by a powerful new “information superhighway.”

Children figured prominently in this vision of the digital future. The Internet would connect everyone in an electronic global village, bringing “the vast resources of art, literature, and science” to all, and making the “best schools, teachers, and courses” available to “all students, without regard to geography, distance, resources, or disability.” (1)

With this promise, the government announced its goal of linking every school and library, every hospital and clinic to what it called the National Information Infrastructure (NII) by the year 2000. As the new millennium dawns, we are swiftly moving into this digital age. Although few people still refer to the information superhighway or the NII, the Internet itself—with the advent of the graphically rich World Wide Web in the early 1990s—has become a much more user-friendly tool, rapidly making its way into homes, schools, and libraries,(2) and playing a prominent role in the lives of many American children.(3)

For the most part, surveys indicate that parents have embraced the new technology as a positive influence in their children’s lives, but not without some serious reservations. (4) Much of the public discourse concerning children and the Internet has revolved around the possibility of online access leading to exposure to indecent and violent material, predation, and similar harms in cyberspace. (5) However vital these issues may be, the debate over online safety has in many ways diverted public attention from other important developments in this new medium.

Although there are legitimate concerns about children’s access to harmful and inappropriate adult content online, paying attention to the content and services being created exclusively for children also is important. It is in these areas, after all, that children most likely will be spending the vast majority of their time online. And it is in these areas—from the most costly, elaborate corporate sites to the simplest, homegrown online communities— that the full potential of the Internet, for both good and ill, will be realized. Though it is too early to assess the full impact this new digital culture is likely to have on children, it is not too soon to begin identifying its major features, the forces shaping it, and the direction in which it is going.

This article begins with a brief overview of economic and technological trends in the emergence of the new digital media culture for children. Next, the article provides a description of the types of Web sites being created for children and a more focused look at some of the key interactive features of the Internet and their implications for children. The research is based on preliminary findings from a major study in progress. (6) As such, it is at best a snapshot or a few frames in a moving picture that can only begin to approximate conditions in this swiftly moving field. But precisely because this new digital media system is still in its early, formative stages, we have an opportunity now to influence its future direction. With this goal in mind, the article concludes with an assessment of the actions needed to help ensure the development of a quality digital media culture for children.

The Digital Revolution and Children: “High Tech Is Now My Tech”

Although the focus in this article is on new digital media for children, it is not entirely possible to separate the development of children’s media from the technological breakthroughs and market forces that are driving the formation of the larger digital delivery system. Once distinct technologies (such as the telephone, television, and computer) are being reconfigured and combined. Entire industries that were once considered separate (such as publishing, entertainment, and telecommunications) are now vying for the same audiences. Matching these centripetal developments at every step has been a wave of corporate mergers that give unprecedented market power to a handful of global

conglomerates. (7) At the eye of this cultural, technological, and economic hurricane is the Internet, itself the site of tremendous change. In its short history, the Internet has undergone several critical transitions, evolving from a noncommercial, publicly funded, closed network that connected government agencies and research institutions into a privatized and increasingly commercialized global “network of networks.” From 1993 to 1999, the number of Americans connected to the Internet grew from 3 million to 80 million. Families with children represent one of the fastest-growing segments of the population using the Internet. By the end of 2002, some 58% of U.S. residents are expected to access online services from the home via a wide range of devices, including newer, more affordable personal computers, game consoles, video phones, and next-generation television and digital cable set-top boxes that connect television to the Web. (8) If these expectations are realized, a sizable minority of U.S. homes (approximately 40%) will remain outside the digital loop, but interactive services will have become a communications, marketing, retailing, and cultural medium similar in scope to cable television and newspapers today. (3)

Although the ultimate shape of the new digital media landscape is anything but certain, it seems clear that three key elements—interactivity, convergence, and ubiquity—will have important effects on children. First, the new media are more interactive, or participatory, than the old media. The Internet increasingly offers several ways for children to communicate with each other, interact with the material on a site, and create their own content. Second, the new media combine existing technologies in new ways, a phenomenon frequently referred to as convergence. Technologies that were once discrete, most notably television and computer, are being combined to offer the power of digital electronics with the simplicity of the television remote. Older delivery systems (broadcast, print, and fax) are being similarly joined, as computer-mediated communications gradually expand to include more and more of our personal and professional exchanges. And third, the new media are becoming ubiquitous; that is, touching all aspects of children’s lives. As digital circuitry becomes smaller, cheaper, and more plentiful, and as computer networks become larger and more pervasive, new-media implementations are likely to show up anywhere, including the nursery and the playground. Just as automobiles, household appliances, and home entertainment centers are being given onboard “intelligence” and networked connections to more powerful systems, so are children’s toys and games gaining new power and sophistication through this new digital circuitry. (9)

Electronic media already are playing a significant role in the lives of children and teens, many of whom enjoy access to their own personal media devices. (10) Generation Y—the nearly 60 million children born after 1979—represents the largest generation of young people in the nation’s history. They also are the first to grow up in a world saturated with networks of information, digital devices, and the promise of perpetual connectivity. (11) Although many adults struggle to understand the new media, children are marching into the digital age with great alacrity. According to a 1998 Jupiter Communications market research study, approximately 8.6 million children and 8.4 million teenagers were online, figures that are expected to grow to a combined 38.5 million by 2002, or 69% of children ages 5 to 18. (12) Time spent in front of the television screen is declining, whereas time spent in front of the computer is increasing. (13) Television, however, remains the dominant media pastime for children (who watch an average of 17.2 hours per week, plus another 5.5 hours watching videotapes).³ Rather than displacing television as the dominant medium, new technologies have supplemented it, resulting in an aggregate increase in electronic media penetration and use by America’s children. (14)

Children are using new media in a manner far different from the ways they interacted with television, radio, and the print media, and they have a different relationship with the

media than their parents had. As observed by Idit Harel, a noted expert in the field, children in the late 1990s have definite expectations for interacting with what's on the screen, and are enthusiastic about the complexities and challenges, and about learning with the various technologies. She sums up the attitude of this new online generation with the phrase "High tech is now my tech." (15) Children and teens are in many ways the defining users of the new digital media.

Web Sites for Children: Mapping the Online Terrain

The Internet is a vast collection of inter-connected computer networks that allows the intermingled transmission of text, graphics, and sound files. The low barriers to entry to this new medium allow any individual or institution to create a site on the World Wide Web, which has grown at a staggering rate over the past several years, from about 26,000 sites in 1993 to more than 5 million today. The sheer number of Web sites has necessitated the creation of annotated lists, special search engines, and Web portals that make it easier to organize and navigate this enormous body of content. Designed as gateways to the rest of cyber-space, portals are intended to be the first destination on the Web surfer's journey, gathering most of the resources that surfers want in one place, including news and information, entertainment, e-mail, and instant messaging. (16)

The unique nature of the Internet—an extremely fluid, nonlinear, interactive environment—creates a challenge for anyone trying to describe its content. Unlike traditional media, the Internet can function on many different levels. For example, e-mail can function as a telephone, search engines as a library, chat rooms as a public square, product-based sites as a mall, and download-able movies and games as a theater or video arcade. The experience of going online can be different for each user—personalized and defined by each user's interests and abilities. Despite the challenges of attempting to capture the wide diversity and rapidly expanding content on the Web, it is possible to begin mapping the terrain of the new digital media landscape for children and to identify the key trends that are influencing its development. What follows is a description of some of the noncommercial and commercial players on the Web, and a brief glimpse of the kinds of online content they are creating for children in "kidspace."

Noncommercial Sites: The New Civic and Cultural Playground

Opportunities to engage children in culture, art, science, and education via the Internet abound. Serving as a type of noncommercial portal, the American Library Association maintains a Web site with links to more than 700 "great sites" for children. (17) Many non-profit organizations, museums, educational institutions, and government agencies have opted to extend their missions to the Internet and are playing a significant role in developing online content for children and teens by offering useful public interest and educational sites as well as online community and civic networking projects. Although the sites highlighted here represent only a handful of the hundreds of non-commercial content areas for children on the Web, they illustrate the power of the new media to expand children's horizons by encouraging them to explore, to create, and to form communities with other children.

Nonprofit Sites

The Web's ability to connect children in their own communities and around the world has spawned a number of nonprofit sites. For example, UNICEF's Voices of Youth provides online forums for children, global learning projects for classes, and conferences for

teachers to exchange ideas and strategies. (18) The children's forums include sections for images, stories, and interactive quizzes; discussions; and suggestions for turning ideas into local actions. Similarly, the International Education and Research Network (I*EARN) has member schools in more than 30 countries and features online and offline activities drawing on an extensive network of partners in the fields of education, youth services, relief, and community development. (19)

Some of the most interesting and useful sites for children on the Web are the non-profit sites that perform triple duty, offering resources for children, their parents, and the professionals who work with children. Both the Nemours Foundation's KidsHealth site and the American Association of School Librarians' multifaceted ICONnect (including Kids Connect and Families Connect components) are good examples. (20) Along with the valuable health and curricular materials of their own, these sites also provide useful pointers to other worthy sites on the Web. Other examples include Teen Advice Online, which offers frank, practical advice addressing a wide variety of adolescent concerns, and YO! Youth Outlook, the online version of a monthly newspaper by and about young people that lets them speak for themselves. (21)

In addition, many highly acclaimed nonprofit sites are built on the success of popular educational or "edutainment" television shows and CD-ROMs. For example, Sesame Workshop (formerly Children's Television Workshop), the innovative creator of PBS's Sesame Street, has a Web site for preschoolers that features educational games, stories, and other adventures employing the familiar Muppets from the television show. Children also can download stickers, art, and other items to engage in both online and offline activities. (22) A leader in the transition to digital television, PBS offers parallel television and online programming for such programs as Zoom, and is experimenting with other kinds of programming in which broadcast video will be supplemented with extensive resources available for downloading or online viewing. (23)

Academic Sites

Many of the Web sites for children and parents are maintained by educational institutions, with offerings that meet a variety of special interests and provide useful references on a variety of topics. Typical of the carefully crafted, special-interest collection is the Children's Literature Web Site, assembled with great attention to detail by the University of Calgary Library's David K. Brown. (24) Less elaborate in its construction, but extremely useful, is the University of Massachusetts's Ready Reference service, an extensive A-to-Z listing of sites that provide reliable information on subjects from abortion (world policies, by country, from the United Nations' population information network) to zip codes (from the U.S. Postal Service). (25) Parents and Children Together Online, the product of the Family Literacy Center at Indiana University, is a useful example of a site that children and their parents can use together; in this case, involving online storytelling. (26) On a more practical level, the University Health Service at the University of California Berkeley maintains the Career Exploration Links, a database of more than 700 sites offering vocational and educational information in a wide range of fields. (27)

Government Sites

Various agencies of the federal government, from the Federal Bureau of Investigation and the Central Intelligence Agency to the Department of Veterans Affairs and the Social Security Administration, have set up more than 50 sites specifically for children, many of which are quite colorful and informative. (28) The most educational of these tend to have scientific themes—often with messages about conservation and pollution, health and

nutrition—that most adults would find instructive, too. Planet Youth, one of the newest federal sites, is also one of the most colorful, with material and links pertaining to Native American culture, history, education, arts, and sciences. The site is part of Code Talk, the official Web site of the U.S. Department of Housing and Urban Development's Office of Native American Programs. (29)

This flourishing of educational, cultural, and civic content on the Web is a visible demonstration of the new media's capacity to play a significant role in helping children become informed and engaged citizens of the future. For the most part, however, these educational and informative noncommercial sites have been overshadowed by the much more heavily promoted commercial sites, many of them tied to popular television shows and consumer products. Of the top 25 most popular children's sites on the Web as of March 2000, only four noncommercial sites were included: PBS Online, the Smithsonian Institution, Thinkquest, and Sesame Street . (30)

Commercial Sites: The New Children's Marketplace

Children's value as a market creates a powerful opportunity to serve the youth audience with a cornucopia of content, providing a variety of experiences tailored to different interests, age groups, and tastes, and offering opportunities for new players to enter the digital marketplace. As more and more companies set up shop in the new ".com" marketplace, children can find a rich array of Web sites, tailored to specialized target audiences.(31) At the 1999 Digital Kids conference, a trade show sponsored by the market research firm Jupiter Communications, companies ranged from the largest and most familiar traditional names in children's media (such as Disney and Nickelodeon), to newer ventures created for the Web (such as Headbone Interactive, MaMaMedia, and Girl Games).

Some of the commercial Web sites for children created by these new players have been received with great enthusiasm, not only by children, but also by their parents, their teachers, and media critics. One example of such a new player is MaMaMedia, a company founded in 1995 to create "unique activity-based learning media for children 12 and under, their families, and educators." (32) The MaMaMedia Web site, launched in 1997, has been recognized for its innovative use of new technologies and was given a Computerworld Smithsonian Award from the Smithsonian Institution in 1999.

More common, however, are the media-and product-based commercial Web sites. Surveys show that children and teens spend much of their time online at such commercial portals as Yahoooligans!, Electronic SchoolHouse, Disney's Internet Guide, and GO Network. (33) The GO Network portal, created by Disney and Infoseek (which Disney now owns), serves as both a search engine and a destination where registered surfers can receive their own GO Network Start Page, e-mail account, personalized data (news, sports, stocks, and weather), and Web site construction kit (with unlimited pages), and can participate in chats and message boards. When searching the Web through commercial portals, as opposed to noncommercial portals such as the American Library Association's (ALA) "700+ Great Sites for Kids," children are less likely to find the sites described above as part of "the new civic and cultural playground." A comparison of ALA's great sites for children with the 100 most popular sites is revealing: As of March 2000, only about 20 of ALA's 700+ acclaimed sites appear on the list of the 100 most popular. Dominating the list of the 25 most popular children's sites are commercial sites sponsored by media conglomerates such as Nickelodeon, Disney, Fox, and Time Warner, and toy companies such as Nintendo, eToys, Lego, and Mattel.

Media-Based Sites

Dozens of companies already involved in the children's media business are staking their claims in the rich, fertile landscape of the Internet. Many commercial television channels, as well as individual programs, now have corresponding Web sites—and increasingly the two are being developed in tandem. Promoting the Web site on television also has proven to be a highly effective way to drive traffic to the site. Children and teens who find it easy to multitask (that is, watch television and use the Web site at the same time), are an especially important target for promoting particular shows and related products. The *Dawson's Creek* Web site, one example of such a television-based Web site, reportedly had 1.5 million visitors a week in June 1999. (34) The Disney Channel, The Learning Channel, The Cartoon Network, Nickelodeon, Nick Jr., HBO Family Channel, and the Fox Family Channel have all debuted new children's programming blocks within the past year—promoted through both television and the Internet. (35)

Product-Based Sites

Almost all of the major companies that advertise and market to children have created their own Web sites, designed as “destinations” for children on the Web. At the Digital Kids conference, participants spoke proudly of “branded communities” for teens—Web sites built around products—invoking the slogan, “Love my community, love my brand.” Many of these product-based Web sites are among the most popular sites visited by children. Companies such as Hasbro, Mattel, Frito-Lay, and Lego are just a few that have created Web sites for children. (36) Emblematic of this trend is Mattel's Barbie.com site. Positioning itself as a community for girls, with links to high schools and other “.orgs,” the site offers a variety of online activities designed to appeal to girls. (37)

The Interactive Factor: Communications and Commerce

Children's Web sites, whether commercial or noncommercial, increasingly share common features, including chat rooms, instant messaging, contests, downloadable art, and games. Many Web sites are similar to CD-ROMs in that they allow a child to spend time at the computer interacting with imaginative games, puzzles, and stories designed to enhance skills, tap into a child's curiosity, and foster creative expression. But there are also several major differences between interactive CD-ROMs and content areas on the Web. Through the Internet, children can communicate in real time with other children, explore in cyberspace, and send and receive e-mail. The possibility that such explorations might lead to inappropriate content, aggressive advertising, or even dangerous contacts with strangers has given rise to concerns about children's unsupervised access to the Internet.

Another major difference is that an increasing number of children's Web sites—including the Sesame Workshop and MaMaMedia sites—feature advertising and online sales. (38) Marketers' direct access to children represents a different kind of interaction, one that warrants much more attention. The sections below discuss how children are being treated predominantly as consumers within the context of this new interactive environment, and how branding has become a pervasive and dominant theme of these interactions. The movement to use filtering software to create “safe zones” for children, places in this new digital landscape protected from both predators and marketers, is also discussed.

Children as Consumers

In anticipation of major profits, there has been a veritable land rush of companies seizing the opportunity to create content areas for children on the Web. Although few, if any, of these commercial Web sites have yet to make any money, (39) the growth of children's spending—coupled with the fact that children and teens are adopting new media with such enthusiasm—suggest that the new children's digital marketplace is likely to become very profitable in the future. Children's spending power, as measured by parental purchases influenced by children's preferences, has risen dramatically during the past several decades, doubling between 1960 and 1980, and tripling in the 1990s. Studies by one marketing expert have found that children under age 12 now control or influence the spending of almost \$500 billion. (40) And one Industry Standard report estimated that in 1998, teens spent \$141 billion of their own money in the retail market. (34) Although still only a tiny portion of the e-commerce market, teen spending online also is expected to increase dramatically. According to eMarketer's eRetail Report, teens spent an estimated \$161 million online in 1999, but are expected to spend more than \$1.4 billion in 2002. (41)

The anticipated growth in children's spending power has spurred the creation of an infrastructure of companies studying the youth market, and produced a spate of new products and services designed specifically for children and teens both on the Web and off. These companies are engaged in a variety of market research—from focus groups to online surveys to less orthodox methods—to determine children's behavioral responses to new media. The ad agency Saatchi and Saatchi, for example, had anthropologists visit children in their homes to observe closely their interaction with digital technology. (42) Some companies maintain rooms in their headquarters for regular focus groups with children; others use their online sites to conduct market surveys with children and teens. (43) The intense focus on research within the new media industries has produced a wealth of information about children's preferences as consumers, much of it proprietary, which is guiding the development of digital content and services for children. It has also raised questions about the appropriateness of some of the strategies being used to target children as consumers in this way. (44)

Branded Environments and Online Marketing

A firmly institutionalized system in television, advertising has migrated quickly to the Internet and is now the most promising and increasingly prominent revenue model for funding commercial Web sites, including those designed for children. (45) But the forms of advertising and marketing on the Web differ significantly from the 30-second television commercial. Utilizing the unique features of the Internet, companies can integrate advertising and Web site content to promote brand awareness and brand loyalty among children beginning at a very early age, in ways never previously imagined.

Developing brand loyalty among children has become axiomatic among marketers in recent years, a strategy central to the principle of "cradle-to-grave marketing." As marketing expert James U. McNeal explains, "Children begin developing brand preferences and store preferences in early childhood, even before they enter school. And not just for child-oriented products, but also for such adult-oriented things such as gasoline, radios, and soaps." McNeal speculates that this tendency is strongly rooted in children's developmental need to belong (affiliation) and have order in their increasingly complex lives. (46)

Branding has become a pervasive and dominant theme in the digital media, used not only as a tool to market products, but also as a descriptive and organizing principle for all aspects of media culture. As described earlier, the Web has spawned a new genre of sites

in which the brand, or product, is itself the focus of the content. Such sites turn the concept of sponsorship and advertiser-supported programming on its head; the traditional boundaries between what is advertising and what is program content no longer apply. Media companies refer to themselves as “brands”; even public television calls itself a “brand.” Several innovative strategies to promote brand loyalty have emerged in this new digital culture, generating concerns as well as sales. Three strategies that have raised concerns, especially when targeted to children, include banner ads, one-to-one marketing, and direct sales.

Banner Ads

Banner ads are the familiar flashing brand names at the top of many Web pages. They function not just as a message from a sponsor, but as a kind of gateway, beckoning the user to the sponsor’s own Web site. One click on the banner and a child can be transported through a “hotlink” to a sponsor’s branded environment with its own games, contests, and puzzles—the kinds of “sticky” content designed to encourage children to stay for long periods and to return often. Because of criticisms from consumer groups, many children’s Web sites now put “ad bugs” or the word “advertisement” next to a sponsor’s hotlink; and sometimes place a “bridge page” between the home Web site and the sponsor’s site. These devices require a child to click on an icon before seeing the advertisement or being transported to a different site. Even with these modifications, however, the goal of promoting brand awareness and brand loyalty through the integration of advertising and content is still well served.

When speaking of strategic alliances and partnerships—such as those created through banner ads—companies refer to the practice as “sharing each other’s brand space.” One example of such shared brand space is illustrated by the partnership between MaMaMedia, the innovative site described earlier, and General Mills. On the MaMaMedia home page, an icon invites children to “Zap your friends with Wacky DigSig cards sponsored by Fruit Gushers and Fruit Roll-Ups.” This sponsored activity is designed to drive traffic to the General Mills Web site, You Rule School. (47) In corresponding fashion, the packages of Fruit Gusher snacks feature the Web site address for the MaMaMedia site.

One-to-One Marketing

Through use of the communication features of the Internet, commercial Web sites have developed strategies for developing personalized one-to-one relationships with children to learn more about them to better market their products. For example, many commercial sites entice children into supplying their names, addresses, and friends’ names by requiring them to provide such information to participate in activities on the site. A 1996 study documented many of the data-collection practices employed by children’s Web sites and found that many of these sites were using games, surveys, prizes, and “product spokescharacters” to elicit personal information from children. (48) In December 1997, an analysis of children’s Web sites conducted by the Federal Trade Commission found 86% of the sites surveyed were collecting personally identifiable information from children. (49) In response to the concerns about such practices from parents and consumer advocates, Congress passed the Children’s Online Privacy Protection Act of 1998, which requires parental permission before commercial Web sites can collect personal information from children under age 13. Despite the efforts of consumer advocates, however, the legislation covers only commercial Web sites targeted at children under age 13 and doesn’t address those aimed at teens. Nonetheless, the new law creates an

important legislative precedent for establishing privacy safeguards for children on the Internet.

Direct Sales

A growing number of Web sites for children and teens feature online stores or links to Web sites that are designed to make direct sales over the Internet. Although some companies claim they are marketing only to parents, there is a clear strategy to encourage children to ask their parents to buy the product. (50) A 1999 survey by a market research firm, NFO Interactive, found that 52% of children between the ages of 5 and 17 have asked their parents to purchase an item that they have seen on the Web. (51) Other companies target children directly.⁵² According to Jupiter Communications, in 1999 many companies shifted from passive online advertising to actively targeting children for digital transactions. A recent Jupiter/NFO Consumer survey of 600 children found that 67% of online teens (ages 13 to 18) and 37% of online children (ages 5 to 12) indicate that they have researched or bought products online. Jupiter forecasts that teens will account for \$1.2 billion and children will account for \$100 million of the total projected e-commerce dollars in 2002. (12)

Companies are employing various strategies to facilitate purchases online by children. Web sites such as IcanBuy.com and RocketCash.com are among the first companies to offer online selling to children, through the creation of “digital wallets” that allow parents to use a credit card to deposit a set amount of money into a child’s online account. Many of the Web sites targeted at teens encourage online purchases. For example, react.com is a popular one-stop-shopping site for teens. (53) Here teens can get news, acquire information about their favorite celebrities, find out what styles are “in,” play games, share their concerns, and shop.

From Safe Zones to Quality Zones

In the face of increasingly intense public concern over children’s safety on the Internet, both the federal government and the online industry have come forward with a series of measures to protect children from accessing material on the Internet that may be harmful to them. What is largely lacking in these debates over children’s use of the Internet, however, is an emphasis on a more proactive definition of quality, one that would help ensure the creation and maintenance of Web sites that enhance children’s learning and development, not merely keep them from harm.

Twice in recent years, Congress passed legislation prohibiting the distribution of indecent content to minors on the Internet: first, with the Communications Decency Act of 1996 and, again, with the Child Online Protection Act of 1998. Both of these laws have met with constitutional challenges, however, and have not been implemented. Meanwhile, the private sector has initiated its own strategy to protect children using the Internet in an attempt to ward off potential legislation—at the same time encouraging more families to go online.⁽⁵⁴⁾ Companies have entered the market with filtering, blocking, and monitoring software tools to protect children from harmful Internet content and predators. Filtering software and ratings systems, such as CyberPatrol, SurfWatch, and Net Nanny, which can be loaded directly onto the user’s computer, are designed to block Web pages that contain “inappropriate” content. (55) In July 1999, the Internet industry corporations, in collaboration with public interest organizations, launched the site GetNetWise, providing access to blocking and filtering software, tools for monitoring children’s activities online, and safety tips for both parents and children. (56)

Nearly one-third of all parents with online access already use protective software of some sort. A 1998 study found that “more than half of parents with online-savvy children would be open to paying for subscription services that monitor content and chat for children, with more than a quarter indicating a strong willingness to pay.” (57) Some companies have seized upon these concerns as a market opportunity, creating safe zones for children that are designed to make parents more comfortable with their children going online. JuniorNet, for example, a fee-based service, promises to protect children from questionable content by monitoring chat rooms, screening material from other sites, and providing an advertising-free space. Whether subscription services to provide noncommercial online environments such as JuniorNet prove to be financially viable in a digital world, where so much advertiser-supported content is available for free, remains unclear. (58) Other companies have sought to provide safe zones for children through “roped-off portions of the Internet” that do not attempt to screen out all advertising. (59)

The concept of protected online space for children has captured the attention of industry, policymakers, and child advocates and will likely continue to be an important issue in the coming years. (60) However, debates to date about safe zones for children on the Internet have tended to frame the concept of quality around the absence of harm. If a product, program, or Web site contains no violence, sex, or other inappropriate material, then its very “benign-ness” is often labeled “quality.” Alternatively, a much broader, more proactive notion of quality could harness the unique features of these new technologies as a positive force in children’s lives.

William Damon, director of the Center on Adolescence and a professor of education at Stanford University, has suggested some key attributes that young people need to participate constructively in civil society: “First, intellectual abilities such as reasoning skills, literacy, and the knowledge of history and economy required for making informed judgments. Second, moral traits such as dedication to honesty, justice, social responsibility, and the tolerance that makes democratic discourse possible. And finally, practical experience in community organizations, from which young people learn how to work within groups, in structured settings.” (61) Although such major institutions as the family, schools, and religious organizations will doubtless continue to be the primary sources of a child’s civic education, the new digital media—with their powerful ability to engage children in active learning, to foster community, and to enable children to become creators and communicators instead of just passive recipients—could also play a significant role in helping to develop thoughtful, active citizens.

Ensuring a Quality Media Culture

As the Internet enters its next phase of development, it is likely to become an extension of television rather than an alternative to it. A merger of the Internet and television is already under way. Increasingly, because technologies such as cable modems make audio and video delivery more feasible, the Internet is taking on many of the features of television. Merging television and Internet into one seamless package using a digital set-top box (best exemplified today by WebTV) will likely become the standard communications appliance in American homes. As one network television executive predicted, “As things move to a single appliance and what’s available on the computer becomes available by remote control on the television set, what is an Internet portal today may well evolve into the starting point for the television user tomorrow.” (62)

Whether or not the new digital media culture is harnessed as a positive force in children’s lives in the twenty-first century will be determined in large part by developments taking place today; the trends thus far reveal both promise and peril. On the one hand, the interactive features of the digital media already have begun to empower children, providing them with new tools for self-expression, communication, and education, and

offering them many choices of digital content. On the other hand, the rapid commercialization of the Web, along with its impending convergence with television, could undermine the Web's democratic and educational possibilities before they even have a chance to develop fully. Indeed, the new digital media culture is expanding so rapidly that many health professionals, educators, policymakers, and parents may not be able to grasp its nature, its direction, or its significance in children's lives. A special effort is needed to raise public awareness of what is at stake. Critical steps needed to lay the foundation for creating a quality digital media culture for children in the future are outlined below.

First, a comprehensive, multidisciplinary research agenda is urgently needed to guide the development of digital children's media, including systematic studies that begin to assess the ways in which children interact with new media and the impact on children's cognitive, emotional, and social development. Unfortunately, although market research for new media products and services for children and adolescents is growing at a fast pace, formal academic research on the impact of this emerging new media culture is lagging behind. (23) Research exploring the beneficial uses of new media by children, as well as the potential harmful effects, is needed. Also needed is independent research that examines the economics and business practices of the new media, and in particular, the new forms of marketing and advertising targeted at children. Both government and self-regulatory policies will be necessary to ensure adequate safeguards to protect children in the new digital market-place. For example, the marriage of direct selling and interactive advertising with children's content in the online "kidspace" raises serious concerns about potential deception and manipulation. The increase in advertising and sales targeted at children in the classroom raises similar issues that policymakers, parents, and educators will need to address.

Second, development of a healthy, non-commercial civic sector must be assured in the new media landscape. Although many promising content areas for children on the Web could provide the basis for such an "electronic commons," there are serious questions about whether they can be sustained over the long run and whether they can become a significant and prominent part of the new media landscape. With the increasing dominance of corporate "portals" and the growing commercialization of the Web, the viability of noncommercial civic media for children and teens is by no means guaranteed, and may very well be threatened in the new environment.

And finally, a third and related goal must include an expanded notion of quality in the media. Framing the concept of quality around the absence of harm is far too limiting. Given current trends, there is little doubt that this emerging media system will play a significant role in helping children become consumers, which will contribute to the economy's growth. But in a time of declining voter participation and growing cynicism about the political process, the new media should also be challenged to play a significant role in helping the next generation become more engaged as citizens, contributing to the health of our democracy.

In sum, the goal of creating a quality digital media culture for children must be placed at the forefront of public debate. If this debate is to be an intelligent and reasoned discussion, however, it must be informed by a full range of research on the cognitive, emotional, and social-development effects of the new interactive media, and it must strive for a notion of quality that encompasses the development of responsible citizens for the future. Moreover, it is a debate that must begin at once while the rules that will govern the new media environment are still being formulated and while the technology itself is still in the process of evolving. To allow the market-place alone to determine the winners and losers of the new-media sweepstakes is not only an abdication of responsibility, but also a rejection of the power this new technology puts in the hands of its users. The new

digital media empower children to create their own online worlds. We must all help ensure that at least a part of what children find there is devoted to the public interest.

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1. U.S. Department of Commerce, Information Infrastructure Task Force. The national information infrastructure: Agenda for action. September 1993. Available online at <http://metalab.unc.edu/nii/toc.html>.
2. Though under attack from some quarters, "E-rate" discounts enacted by Congress in 1996 have made significant progress in connecting schools and libraries to advanced telecommunications technologies; some 89% of all public schools were connected by the fall of 1998, up from 78% the year before and 35% in 1994. See Rowand, C. Internet access in public schools and classrooms: 1994–98. NCES issue brief. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, February 1999. Available online at <http://nces.ed.gov/pubs99/1999017.pdf>. For more information on the "E-rate," see the Education and Library Networks Coalition Web site at <http://www.edlinc.org>.
3. Though there remains a troubling "digital divide" between more affluent families with access to technology and lower-income homes without, already more than one-third of U.S. families are online, and the numbers are growing steadily. Computer ownership is now almost as common as cable television subscriptions among households with children, and Internet access is almost as common as newspaper subscriptions. See Stanger, J.D., and Gridina, N. Media in the home 1999: The fourth annual survey of parents and children. Philadelphia: Annenberg Public Policy Center, University of Pennsylvania, 1999. For a more detailed discussion of the data and issues surrounding children's access to computers, see the article by Becker in this journal issue.
4. Turow, J. The Internet and the family: The view from parents, the view from the press. Philadelphia: Annenberg Public Policy Center, University of Pennsylvania, May 1999.
5. See, for example, the America Links Up Web site at <http://www.americalinksup.org>.
6. Center for Media Education. Teens and digital media. Washington, DC: CME. In press.
7. Wieffering, E. Consumers could pay price when Web merges with TV; as media conglomerates consolidate power, the Internet is focusing more on selling stuff than on spreading ideas. Minneapolis Star Tribune. February 15, 1999, at 1A.
8. Swerdlow, F.S., Allard, K., Krucoff, A., et al. Online customer service: Strategies for improving satisfaction and retention. New York: Jupiter Communications, April 1999.
9. Current examples of such "intelligent" products for children include Mattel's and Microsoft's Actimates dolls and Lego's MindStorms programmable blocks.
10. Among children ages 6 to 17, for example, 86% have access to a VCR (23% in their own rooms), 70% have a video game system at home (32% in their own rooms), 50% have a television in their own room, 40% have their own portable cassette/CD player, and 35% their own stereo system. Roper Starch Worldwide. Today's kids—especially teens—are wired to the hilt. Press release. New York: Roper Starch Worldwide, November 24, 1998. Available online at <http://www.ropers.com/news/content/news93.htm>.
11. Neuborne, E., and Kerwin, K. Generation Y. Business Week. February 15, 1999, p. 80.
12. Jupiter Communications. Kids and teens to spend \$1.3 billion online in 2002: Parents' concerns rising as postmodern kids enter the age of digital commerce. Press release. New York: Jupiter Communications, June 7, 1999.
13. Thirty-two percent of 11- to 20-year-olds spend 10 to 20 hours per week online. GVU's tenth WWW user survey. Atlanta: Graphics, Visualization, and Usability Center, Georgia Institute of Technology, October 1998. Available online at http://www.gvu.gatech.edu/user_surveys/survey-1998-10/preview/use/q30.htm. See also Roberts, D.F., Foehr, U.G., Rideout, V.J., et al. Kids and media @ the new millennium. Menlo Park, CA: Henry J. Kaiser Family Foundation, 1999; Keane, P., and Mooradian, M. Kids: Evolving revenue models for the 2–12 market. New York: Jupiter Communications, August 1998; Card, D., Rubin, R.S., and McAteer, S. Chat and instant messaging: Matching messaging technologies to diverging site applications. New York: Jupiter Communications, September 1998.
14. See note no. 3, Stanger and Gridina. According to this survey, children also spend an average of 4.6 hours weekly playing video games, 3.9 hours talking on the telephone, 6.8 hours using computers, 5.4 hours reading books, 8 hours doing homework, and 2.4 hours reading newspapers and magazines.
15. Idit Harel, formerly a professor at Massachusetts Institute of Technology's Media Lab, is now

president of MaMaMedia, Inc. Her remarks are included in Center for Media Education. Ensuring a quality media culture for children in the digital age. Washington, DC: CME, May 1999.

16. See information provided at <http://disney.go.com/investors/go/index.html>; see also Media Metrix. Kids ages 2–11. Media Metrix, home Web audience. May 1998.
17. American Library Association; see Web site at <http://www.ala.org/parentspage/greatsites/>.
18. UNICEF's Voices of Youth; see Web site at <http://www.unicef.org/voy/>.
19. International Education and Research Network (I*EARN); see Web site at <http://www.iearn.org>.
20. Nemours Foundation's KidsHealth Web site; see Web site at <http://www.kidshealth.org>.
- ICONnect; see Web site at <http://www.ala.org/ICONN/>.
21. Teen Advice Online; see Web site at <http://www.teenadviceonline.org/>. YO! Youth Outlook; see Web site at <http://www.pacificnews.org/yo/>.
22. Preschool Playground; see Web site at <http://www.ctw.org/preschool/>.
23. See note no. 15, Center for Media Education.
24. The Children's Literature Web Guide; see Web site at <http://www.acs.ucalgary.ca/~dkbrown>.
25. Ready Reference Using the Internet; see Web site at <http://www.winsor.edu/library/rref.htm>.
26. Parents and Children Together Online; see Web site at http://www.indiana.edu/~eric_rec/fl/pcto/menu.html.
27. Career Exploration Links; see Web site at <http://www.uhs.berkeley.edu/CareerLibrary/links/careerme.htm>.
28. The U.S. Department of Education maintains a full listing of federal Web sites for children. See Web site at <http://www.ed.gov/free/kids.html>.
29. Planet Youth; see Web site at <http://www.codetalk.fed.us/planet/planet.html>.
30. 100hot Kids; see Web site at <http://www.hot100.com/kids>.
31. See note no. 7, Wieffering.
32. MaMaMedia's founder, Idit Harel, was a protégé of MIT's Seymour Papert, the father of constructionist theory. She earned her Ph.D. from MIT's media lab and taught there for several years before launching her online venture. See MaMaMedia. MaMaMedia debuts broadband content on Road Runner's cable modem service. Press release. New York: MaMaMedia, Inc., May 18, 1999.
33. Yahoo!igans!; see Web site at <http://www.yahoo!igans.com>. Electronic SchoolHouse; see Web site at <http://www.eschoolhouse.com>. Disney's Internet Guide; see Web site at <http://www.dig.com>. GO Network; see Web site at <http://www.go.com>.
34. Anderson, L. Mixing teen cool with e-commerce savvy. *The Industry Standard*. June 17, 1999.
35. Moss, R. "Electric Company" plugs into cable TV. *The Fargo Forum*. April 22, 1999, at A17. The new children's cable channel, Noggin, has been planned with convergence in mind. A joint venture of Children's Television Workshop and Nickelodeon, Noggin ties the television channel to a corresponding Web site, with the latter "...used to fuel the network's connection to kids and complement the programming on television. Kids will be asked to 'build' the Noggin Web site, which will offer a wide range of information and activities for kids, their parents and teachers, as well as content from Nickelodeon's and Children's Television Workshop's Web sites." *Dish Entertainment Magazine*. February 1999, p. 19.
36. Hasbro; see Web site at <http://www.hasbro.com/home.html>. Frito-Lay; see Web site at <http://www.fritolay.com>. Lego; see Web site at <http://www.lego.com>. Mattel; see Web site at <http://www.mattel.com>.
37. A recent survey by Roper Starch corroborates girls' online preferences. The study found that girls are "more likely than boys to socialize online." For instance, girls do more chatting (44% versus 35%), sending/receiving e-mail (37% versus 27%), and answering surveys (13% versus 5%). Boys prefer playing online games (36% versus 26%), getting sports statistics (25% versus 8%), and downloading software (20% versus 10%). See Roper Starch Worldwide. Kids favor Internet for homework, chatting, and surfing: As in real life, girls are greater virtual socializers. Press Release. New York: Roper Starch Worldwide, February 22, 1998. Available online at <http://www.roper.com/news/content/news111.htm>.
38. Although Children's Television Workshop's executives are very careful to point out that they are targeting only parents, not the preschool children, with their advertising, having ads at all on a site aimed at preschoolers raises some troubling issues. See Slatalla, M. Sesame Street site: Serious child's play. *New York Times*. April 22, 1999, at E8.
39. Mitchell, D. Do profits really matter? Only three Net companies made money in 1999. No one is complaining. *The Industry Standard*. December 20, 1999–January 3, 2000, pp. 155–56.
40. Russakoff, D. Marketers following youth trends to the bank. *Washington Post*. April 19, 1999, at A15–16. Statistic based on studies conducted by James U. McNeal, marketing professor at Texas A&M University, and includes purchases of not only toys, CDs, and clothes influenced

by children, but also vehicles and choices of motels for family overnights.

41. This represents an increase in market share from less than 1% to 2.2% of total U.S. online shopping. See Internet.com. The big picture demographics: U.S. teens increase online shop-ping. September 22, 1999. Available online at

http://cyberatlas.internet.com/big_picture/demographics/article/0,1323,5901_205961,00.html; see also eMarketer. eRetail Report. September 21, 1999. Available online at http://www.emarketer.com/aboutus/press/092199_teens.html.

42. See note no. 40, Russakoff, at A15–16.

43. The company that created the GirlGames Web site, for example, hosts slumber parties for small groups of teens around the country, during which researchers attempt to build “trusting relationships” with the girls. See note no. 23, Center for Media Education.

44. Hays, C.L. Group says ads manipulate children with psychology: Group wants APA to denounce them, curb their research. New York Times. October 31, 1999.

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46. McNeal, J.U. Kids as consumers. Lanham, MD: Lexington Books, 1992.

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48. Center for Media Education. Web of deception. Washington, DC: CME, 1996.

49. InternetNews.com. Internet advertising report: FTC survey finds many kid sites collecting marketing data. December 17, 1997.

50. Schoolman, J. “Nag factor” plays role in what parents buy: Only 31% of parents are immune to their kids’ whining. The Toronto Star. August 24, 1998, at E3.

51. Cox, B. Parents deluged with Web buy requests from kids. InternetNews.com. June 9, 1999.

52. With more and more schools being linked to the Internet, many of these same companies are targeting the classroom as a site for marketing and online sales to children. This trend was well evidenced at the conference titled “Digital kids: Marketing to the postmodern kid.” San Francisco, June 7–8, 1999.

53. Other examples include Delia’s, see Web site at <http://www.delias.com>; MXG Online, see Web site at <http://www.mxgonline.com>; Alloy Online, see Web site at <http://www.alloy.com>—all of which are online shopping malls for girls.

54. See, for example, America Links Up at <http://www.americalinksup.com>.

55. Center for Media Education. Youth access to alcohol and tobacco Web marketing: The filtering and rating debate. Washington, DC: CME, 1999.

56. Schwartz, J. New site helps parents get wise on kids’ net use. San Jose Mercury News. July 30, 1999, at 1C. See Web site at <http://www.getnetwise.org/joinus/shtml>. The project was announced by the White House in May 1999 as the “One Click Away” initiative, in which online companies agreed to create a “parents’ protection page” on all major portals, search engines, and Web sites. See President Clinton and Vice President Gore. Keeping children safe on the Internet. Press release. Washington, DC: The Executive Office of the President, May 5, 1999. Available online at <http://www.whitehouse.gov/WH/Work/050599.html>.

57. See note no. 4, Turow; see also Jupiter Communications. Kids and ads: Do they mix? New York: Jupiter Communications, June 8, 1999.

58. This sentiment was expressed by a number of panelists at the 1999 Digital Kids conference. See note no. 52.

59. One example is Disney’s Club Blast, which costs \$9.95 per month, or \$39.95 per year. See Flaherty, J. Safer Web playgrounds are aimed at kids (and paying parents). New York Times. March 11, 1999. Three other services, America Online’s Kids Only channel (AOL keyword: Kids), Kids Online America’s KOLA Network (<http://www.kola.net>), and 1st Net Technologies’ kid-safe browser, Crayon Crawler (<http://www.crayoncrawler.com>), all were rolled out within days of one another in mid-March 1999. See Smith, S., ed. Three kids’ products launch with safety appeal to parents. Min’s New Media Report. March 29, 1999, pp. 1–2.

60. At one of the 1999 White House summits on the Internet and children, for example, a special session was devoted to a discussion of “green space” on the Internet. But although referring to green space as the online equivalent to public parks and playgrounds in the real (or “offline”) world, many in industry and government alike seemed to have a different concept for the online version, one that assumed the presence of advertising and marketing as part of the scenery.

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62. Rothenberg, R. Go ahead, kill your television. NBC is ready. Wired. December 1998, p. 262. That media industry executives recognize the power of the portal for the digital future is well

evidenced by the most recent portal deals: ABC/Disney-Infoseek, NBC-CNET/Snap in 1998, CBS-AOL, @Home-Excite, Fox-Yahoo, and USA-Lycos in 1999. See Tedesco, R. Can't play without a partner. *Broadcasting and Cable*. February 15, 1999, p. 73.