

Network Localities: Identity, Place, and Digital Media¹

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Addressing debates about culture and globalization, this paper looks at how identity and place is produced through and within digital media infrastructures. "Network locality" describes affiliation that spans geography through media technology, but is grounded in concrete places, practices, and material relations. The contrast between global flows and local practice and identity is the wrong starting point for approaching new media technologies. Rather than being a univocal force of globalization, digital media is both produced by and productive of localized social relations and interests. Two cases of network localization around age-cohort identity are presented: SeniorNet, a network of computer-using senior citizens, and fans of the computer game SimCity 2000. The picture that emerges is that locality—as defined place as well as meaningful context—remains robust, but the players that contribute to it can be impersonal, technological, and spatially dispersed. Denaturalized from association with geographic place, locality is unbounded and dynamic, an ongoing partial achievement that never exhausts possibilities for affiliation and solidarity. At the same time, it is grounded in particular social practices, materialized texts, placed infrastructures and architectures. All localities are ultimately hybrids of geographically and technologically placed connection.

Anthropology has a pressing need for ways of describing affiliation that spans geographic regions, but is grounded in concrete places, practices and material relations. A growing body of work interrogates the relation between peoples, places, and cultures, focusing on mobility, mixture, and what Arjun Appadurai has called "global cultural flows" (1996: 33). Akhil Gupta and James Ferguson have critiqued anthropological models of discrete societies, nations, and cultures "occupying 'naturally' discontinuous spaces" (1992: 6). They suggest instead that "spaces have *always* been hierarchically interconnected" and places and communities are constructed in the face of translocal interconnections and the flows of people and culture (p. 8). Similarly, James Clifford describes paradigms for translocal study that "begin with historical contact, with entanglement at intersecting regional, national, and transnational levels... systems already constituted relationally, entering new relations through historical processes of displacement" (1997a: 7). Citing globalization, diaspora, migration, and cultural hybridization, the argument is that culture and social relations are distributed across space and structured by forces of a translocal nature, and the identity of places is similarly unbounded and dynamic.² The challenge is to take these critiques seriously without losing hold of the strengths of grounded ethnography: attention to detail, situated practice, everyday knowledge, and cultural difference.³

Media technology plays a key role in these debates. Together with mobile populations and global capital, digital media appear as part of the contemporary mix of forces contributing to the crossing and blurring of national boundaries. The transnationalization of media industries and technologies such as the Internet drive theoretical revisioning, forcing a recognition of transnational interconnection, and casting into relief the historical interconnections of even long-standing anthropological objects.⁴ This emerging recognition of how place and locality is (and has always been) a technology-enabled achievement, produced in the face of translocal interconnection, is a welcome one. It has yet, however, to be even applied, paradoxically, to those domains that are seemingly most technologized and fabricated. While new media forms feature prominently as technologies of de-localization little sustained attention has been paid to how place and locality is newly produced *through and within* media infrastructures. The focus has been on media as it flows across borders and disrupts existing place-based boundaries and categories of nation and community, rather than media as it creates its own boundaries and places. As Anna Tsing has argued, we need to “stop making a distinction between ‘global’ *forces* and ‘local’ *places*.” Instead, we might think of “cultural processes of all ‘place’ making and all ‘force’ making are *both* local and global, that is, socially and culturally particular and productive of widely spreading interactions” (2000: 352). An automatic association between digital media and globalized flows of information and culture harbors a technologically determinist assumption that networking technologies such as the Internet *necessarily* create disjunctures between people, culture, and places. Instead, what would it mean to take the production of locality seriously, not only in the geographically rooted places that we generally associate with the local, but also within those very flows of electronic information that are thought to fragment our ties to the local?

In the conclusion of their essay, Gupta and Ferguson pose a challenge:

In stead of stopping with the notion of deterritorialization, the pulverization of the space of high modernity, we need to theorize how space is being *reterritorialized* in the contemporary world. We need to account sociologically for the fact that the ‘distance’ between the rich in Bombay and the rich in London may be much shorter than that between different classes in the ‘the same’ city. Physical location and physical territory, for so long the *only* grid on which difference could be mapped, need to be replaced by multiple grids that enable us to see that connection and contiguity—more generally the representation of territory—vary considerably by factors such as class, gender, races and sexuality, and are differentially available to those in different locations in the field of power (1992: 20).

This paper takes up this theoretical challenge in the domain of networked places and localities. I look at the dynamics of re-territorialization, specifically localization, through digital media, describing how social and cultural distance is both reproduced and reconfigured through new media technology as it is differentially available to and accessed by people in different social locations. Instead of opposing these new forms of technologically mediated affiliation to physical location, this essay insists on the grounded and material nature of these techno-localities (Schwarz 2001). How are media technologies produced by and productive of distance, proximity, and social differentiation? What are the material relations that enable connection, affiliation, and exclusions in these networked relationships? As we rethink models that contain peoples and cultures in bounded territories, we also need to ground the seemingly unrestrained currents and minglings of media flows; the assumed isomorphism between people, place, and culture is mirrored by an assumed isomorphism between media, displacement, and boundary-crossing. This essay argues against this second isomorphism by first, untangling the threads tying together these associations, and then presenting two examples of networked localization through digital media in an online senior community and among computer game fans.

Locating Digital Media

Words embody cultural theory; they insist that affiliation and proximity be tied to geographic places. I seek but can not find words to describe affiliation that is not geographically localized, and yet is robust, multi-layered, and specific. Most words describing richly contextualized affiliation are related to geography. Explicitly geographically based terms include standbys such as locality, region, community, ghetto, enclave and zone, and political or organizational terms such as bailiwick, nation, province, state or federation. A related series of terms, still with strong geographic connotations, includes conceptual boundaries such as area, domain, field, or sector. Finally, a series of more organizational terms such as association, league, consortium, body, set, or alliance, rounds out the different terms that I found in my forays through dictionaries and thesauruses. This last set of terms carries fewer geographic connotations, but not coincidentally, also connotes associations that are more activity-specific rather than providing multi-layered and deeply rooted affiliation. Richer forms of affiliation, by contrast, cluster around terms more directly tied to geography, testifying to the ways in which geographic location is naturalized (Yanagisako and Delaney 1995) as the basis for social cohesion. Terms to describe geographic, cultural, and social proximity are so deeply tied to one another as to be virtually inseparable, and function constantly as metaphors for one another.

Terms such as cyberspace (Gibson 1985) and virtual communities (Rheingold 1993) are unstable compounds that leverage the sense of rootedness invoked by the

geographically based term, while simultaneously invoking a term that disrupts traditional geographical understandings. The disruptive and denaturalizing effects of these compounds overshadow continuity with previous understandings of space and place. Particularly in the initial heady excitement of Internet discourse, the cybernetic, the electronic, and the virtual propelled us away from place and materiality, insisting on freedom and motion, and questioning whether experiences of place and identity need to be tied to bodies and places at all. Pioneering work on Internet groups focused on dynamics such as online discourse and identity play, suggesting that computer networking and digital media enables sociality not bound by common convention, space, or other physical limitations and identities.⁵

Ethnographic studies of online communities and conversation have looked extensively at the unique forms of interaction and representation afforded by online contexts (Allen 1996, Cherny 1999, Hine 2000, Ito 1997, Marcus 1996, Markham 1998, Miller and Slater 2000, Reid 1995, Turkle 1995) and are a starting point for the framework presented in this paper. This work has taken the important step of describing how the seemingly ephemeral flow of bits on the net is the site of real and consequential social action and cultural production. It has opened up possibilities for seeing engagement with media as an interactive and communicative process that produces and condenses social relations spanning geographic space. One side effect, however, is that a focus on new social forms and de-localization is achieved at the expense of examining the relation to place, technical infrastructures, and prior contexts. Examining the more obviously human side of the equation often means delegating the obscurities of technical knowledge to the disciplines that create them. The participant observer occupies the position of a community participant, who generally encounters online sites already-made, with the technical underbelly carefully erased, and the prior contexts and commitments of participants systematically unavailable.

In her review of “virtual ethnography” Christine Hine distinguishes between a view of the Internet as comprising a culture in its own right, and a view of the Internet as a cultural artefact produced within different social contexts. She sees most of the early ethnographic work on the Internet as falling into the first camp, focusing on bounded online sites such as gaming communities or newsgroups that reproduce many of the conditions for ethnographic participant observation. “A focus on community formation and identity play has exacerbated the tendency to see Internet spaces as self contained cultures, as has the reliance on observable features of social organization” (2000: 27). She suggests that by examining historical contexts in which the Internet was produced, as well as the variety of different contexts in which it is used can help offset this tendency. She draws on approaches in technology studies that describe technology as a materialization of social process, produced as a result of negotiations between diverse social groups (p. 32-33, Pinch and Bijker 1987).

In a similar vein, Daniel Miller and Don Slater critique “that earlier generation of Internet writing that was concerned with the Internet primarily through concepts of ‘cyberspace’ or ‘virtuality’”. “These terms focused on the ways in which the new media seemed able to constitute spaces or places *apart from* the rest of social life (‘real life’ or offline life), spaces in which new forms of sociality were emerging, as well as bases for new identities, such as new relations to gender, ‘race’, or ontology” (2000: 4). Miller and Slater highlight the assumption that Internet communities represent social relations and identities that are dematerialized and dis-placed. Their suggestion is to start “from the opposite assumption, that we need to treat Internet media as continuous with and embedded in other social spaces, that they happen within mundane social structures and relations that may transform but that they cannot escape into a self-enclosed cyberian apartness” (p. 5). Their work is based on ethnographic study of Trinidadian use of the Internet. Rather than use the Internet to be “abstracted and distanced from local and embodied social relations,” Trinidadians “invest much energy into trying to make online life as Trinidadian as they can make it, to see the Internet as a place to perform Trini-ness” (p. 7). This paper is in alignment with Miller and Slater’s approach, but looks further for continuity with prior social spaces.

Geographic based places such as nations and villages are not the only sources of an embodied and localized sociality, and yet these are the kinds of locales that remain the focus of studies of even networked and diasporic sociality. Nations and geographic regions have the historical force of years of sedimented rhetoric, imagining, and territory-building, and a focus on national identity in considering affiliation and place is understandable and principled. Miller and Slater’s study is one example of this. In a similar vein, studies of diaspora, interculturalism and cultural hybridity question static notion of places and identity, but still take national identity as a starting point. In contrast, what would it mean to consider the material and localized basis of categories that are not geographically contingent, such as gender, age, sexual orientation, or wealth? These forms of identity can produce place in the most obviously material ways, such as through constructing gated or intentional communities and neighborhoods differentiated by wealth. This paper considers a related but different dynamic, how people use networking technology as material for constructing alternatives to geographic localities, network localities driven by non-geographic forms of affiliation.⁶ Benedict Anderson’s celebrated work on the construction of national identity sees print technology as one material basis for the imagining of nation (1991). By extension, we might consider how media technologies including the Internet, phones, print, and broadcast media are part of the materialization and imagination of different forms of identity. Appadurai’s suggestive formulation of global cultural flows—ethnoscapes, mediascapes, technoscapes, financescapes, and ideoscapes (1996: 33-35)—constitute not only

imagined worlds, but concrete places and architectures, localities build through the imagination embodied in media infrastructures.

This effort to salvage the local in the face of global networking technology is an extension of established positions in contemporary cultural anthropological thought. There are good reasons for recognizing how standardized technologies, acquisitive capitalism, and mass marketed Euro-American cultural forms dominate logics of globalization. And there are also good reasons for looking to certain geographic localities and “peripheral” cultures as resilient sources of resistance to such logics. But there are also reasons to challenge the opposition between global networks and local knowledge, to be skeptical that the experience of difference within trans-geographic interconnection can be understood fully within a framework of accommodation or resistance to Westernizing, modernizing, and capitalizing processes. Anthropologists have long been aware that cultural identity and difference is produced relationally, in contact with “others,” and through translocal conversation, as much as it is a “local” product. We might also assume that growing international cross-talk would result in a proliferation of new forms difference as much as in the preservation of existing local and national distinctiveness. These differences are not only products of nostalgia and resistance to “global culture,” but of new kinds of solidarities articulated *through* trans-geographic networking. This approach takes seriously translocal and transnational interconnection, while insisting on technologically embodied and situated knowledges (Haraway 1991) which are definitively placed and partial. It is not that anthropology has nothing to contribute to the conversation on globality and must always retreat to a local frame. Rather, the effort here is to present one viable and practical analytic frame for ethnography of trans-geographic and technologically mediated affiliation which plays to anthropological strengths in analyzing culture, affiliation, and embodied knowledge.

Internet social life is localized and materialized regardless of whether it cites existing geographic places. At the same time, an escape from geographic metaphors in describing affiliation is impossible. In fact, associations attached to terms such as place and locality have important rhetorical force in arguing for the materiality of digital media. I see locality and community as terms with connotations and histories worth preserving as well as challenging. I have emerged from a minefield of terms with what may seem odd allies in my quest for a materialized media-space. I mobilize the term “network,” a sober cousin to terms such as “cyber” and “virtual,” in an attempt to sidestep the excesses of de-materialization discourse, and to invoke the silent presence of routers, cables, fiber optics and satellites that are the material ground for distributed social relations.⁷ “Locality,” as a grounded counterpart to “community” *insists* on place in a way that the latter term does not; it is not as easily spun out into the realm of the imagination or the virtual due to its stronger semantic roots in geography and place. The intent is not to police the boundaries of what counts as a locality, place, or community, but to mobilize

terms that draw out continuities with social forms with which I am drawing analytic links. I use locality to refer to social, cultural and spatial proximity at a scale that is experienced as personally relevant and accessible, a materialized convergence of place, established practices, and group affiliation.⁸ By proximity, I include geographic proximity and technologically mediated proximity. My focus is on the latter, what I am calling “network locality,” locality as it is constructed through technological infrastructures that span geography. While taking this focus, my goal is to work across the distinction between geographic and technological location, insisting on the place-bound nature of digital media as well as the networked nature of geographic identity.

The remainder of this paper presents two ethnographic cases of network localization around age-cohort identity. The first is of SeniorNet, a national network of computer-using seniors that is organized through sites on the World Wide Web and America Online. The second is a case of a child’s affiliation with niche computer gaming fan communities associated with SimCity 2000. In both of these cases, I describe the “online” interactions and content, as well as the conditions and material relations through which these localizations were achieved.

Making a Place for Seniors on the Net

In 1998-99, my colleagues and I conducted an ethnographic study of SeniorNet, a US-centered network of computer user seniors.⁹ SeniorNet is a nonprofit organization founded in 1987 with the mission to “provide older adults education for and access to computer technology to enhance their lives and enable them to share their knowledge and wisdom.” Activities have included the support of computing classes at “learning centers,” as well as support of online communities. SeniorNet’s online sites provide chat capabilities and a multitude of roundtables (bulletin board style discussion groups) on topics ranging from book clubs to World War II memories, including a Café for casual socializing as well as roundtables to support grieving. Currently, there are nearly 20,000 members comprising thriving online communities on both America Online (AOL) and the World Wide Web (Furlong 1989).

Membership in SeniorNet is roughly bounded by age, as the site is organized for people over the age of fifty. All areas of the site are accessible by the general public, however, and there is no mechanism to verify age when one registers as a member. The content of the discussion groups is also not limited to age-related topics. Certainly some of the topics discussed relate specifically to age, such as World War II memories or arthritis support groups. But many other topics are of general interest. The social and cultural definition is more subtle, and built on the sedimentation of practices over a ten-year community history. People value the company of others with shared interests and experience as they range across a wide variety of topics. With topics less related to age, people tend to establish common ground around similar life experiences. For example,

the AlAnon group's discussions followed familiar AlAnon themes—people talked through the steps in the 12-step program and ended postings with tags like “One day at a time” and “Let go and let God.” But here, most “qualifying relatives” whose alcoholism had prompted them to join AlAnon, were grown children and grown grandchildren.

Support and caring are considered particularly emblematic of SeniorNet. Many describe how retirement, relocation, the death of friends or loved ones, or the onset of physical disabilities severed many of their geographically local ties, and how SeniorNet has filled that gap in their social lives. Bud Robb, one of the first SeniorNet hosts, describes this aspect of SeniorNet:

Being a member on SeniorNet gives you entre into someone's house, the way that being a fraternity or sorority member might be. ... And it has expanded—friends—and I don't mean just acquaintances—caring, dear friend—exponentially. I never could have expected that this would happen, you know. When I retired, I figured, well, little by little, my friends will die off, and maybe I'll die and that will be the end of it. And instead, it's just like a lotus blossom opening. It's just burgeoning.

Others described how SeniorNet has provided social support during times of crises, such as prolonged illness or a death in the family. When my research team introduced ourselves online, we asked people for advice on how to get to know SeniorNet. A frequent suggestion was to look in the sympathy and bereavement roundtable, to see the quality of support on SeniorNet. One community member, Sajanina, describes her experience:

When my dad was dying I quickly moved into his house, about four months or five months before he died. ... And the continuity in my life was being able to talk with those folks in SeniorNet who had all been part of my life before. . . And everyday I would write in the death and dying folder about his dying and people would respond. And they responded with tremendous support and understanding. And they encouraged me to continue to verbalize, to put the whole experience into words, not at the end, but each day. Okay? I found my voice in terms of the expression of what I was going through, by telling it to all of them. And after my dad died, what I did was I took down all of those posts. And I put them in a big album. And it was so much that I had to split it into two albums. One album was for the posts that I had written while he was alive, and the other album was just for all the condolences that came in and the beautiful, supportive things that people said. It was quite an experience.

Throughout our observations, we were struck with SeniorNet's unusually welcoming and civil atmosphere, in contrast to the Net at large. Members describe their community as unusually warm and friendly compared to other network communities dominated by "youngsters." One participant explains: "A lot of people come on SeniorNet and other places and say, 'I just got so tired of the youngsters out there doing all the dumb things they're doing on chat and so forth.'" Another SeniorNet member, D. Pat Cooper, objected to some of the language found on the Net at large: "As soon as I see a bad word or a cuss word in a chat room or filthy talk—and there is a lot of that—I just leave."

While SeniorNet is an unusually open and welcoming community, it has definitional practices that create barriers to entry and support a local identity. Some of these barriers are general to network communities, such as high literacy requirements and technological and economic preconditions to access. Surveys of SeniorNet indicate that most members report that they are Caucasian, highly-educated, suburban, and middle class (Schwarz and Schwarz 1991, SeniorNet 1995), attesting to basic preconditions to Net access. But others are more subtle and community specific, such as the need for high volume participation and a courteous demeanor. Absences of even a few days are noticed, and people "return" to posting with apologies and explanations. SeniorNet participants are encouraged to adhere to the prevailing norms, to preserve the low-key character of the site. Those with non-mainstream views or provocative styles of interaction can be seen as transgressing boundaries. These different norms and practices produce a sense of local identity and solidarity defined against the norms of the younger generation.

Like attracts like... seniors attract seniors. That is not to say that I don't mingle or socialize with younger people, I do. However my comfort zone is with people I can relate to and with... Some of the youth today do not understand us. They categorize us in one lump image. Not so, and we as seniors know it. Each day is they day I again start to live.

Members described a value in associating with people of similar age, but objected to senior identity as an externally-imposed category which could not entirely specify a person's real subjectivity. They consistently object to the production of senior identity by non-seniors. "I don't fit in anyone's boxes and never thought anyone else did either." When we started our research, we received challenges due to the fact that there were no seniors present on our research team. SeniorNet works as a performance space for being a particular kind of senior, one who conforms to many stereotypes of what a senior is, but who resists some stereotypes, particularly the notion that seniors are technology-adverse. SeniorNet does not simply draw a boundary around an existing social identity, but newly refashions it through a network locality produced by and for seniors.

This community is grounded in material relations built through the course of over ten years by the SeniorNet organization and members—the fundraising and place construction that goes hand-in-hand with community building. This has meant the usual processes of finding sponsors and grants, hiring staff, renting offices, and building alliances with related institutions such as senior centers and organizations. The online component of SeniorNet has required the mobilization of technology: distributing computers, negotiating with online service providers, and designing and managing the online sites. SeniorNet has its roots in a research project headed by Mary Furlong and funded by the Markle Foundation starting in 1986. SeniorNet has always included an online community as well as learning centers in various geographic locales. The project started with a discussion area on the Delphi bulletin board system. Apple computers with modems were shipped to twenty pioneering seniors, and additional access points were set up at five senior centers. In the days before the Web and before computers were a common household appliance, SeniorNet had to provide computers and negotiate access points, and packets flowed slowly across analog telephone lines. SeniorNet expanded the number of learning centers, and aided by press coverage in traditional media, word spread that there was an online place devoted to seniors. In 1991, SeniorNet moved over three hundred members from Delphi to AOL, and in 1996 it launched a new network community on the Web.

SeniorNet's growth has been aided by the open architectures of the Internet, which quickly expanded its membership into the tens of thousands. At the same time, it has also had to work harder to hold its community together, and to market itself and distinguish itself from other senior-related sites in an expanded playing field. What was once a sparsely populated territory in a bounded online bulletin board system, accessed through modems and dial-up connections, is now a web page and an area on AOL accessible by millions of people and innumerable forms of connectivity. SeniorNet's roster of supporters has expanded accordingly, and includes Microsoft, Charles Schwab, Intel, IBM, Intuit, MetLife and 3Com. SeniorNet has succeeded in becoming an Internet site with brand recognition. In 1999 it won the Webby Internet site award for best community site, and it has been selected by Yahoo as the best senior community site for the past three years. Throughout its history, SeniorNet has defined its focus and built concrete architectures to support its online presence, the contours of which change with technical changes and the increasing commercialization and popularization of computer networking. In the SeniorNet learning centers, participants pay a fee to become members of the organization when they sign up for classes. With the online communities, the boundaries for membership are more diffiuse. To post to the web site, one has to register, but there is no fee, and it is not linked to membership in the SeniorNet organization. The boundaries of participation fluid, and it takes ongoing work to maintain the distinctive character of the site and a sense of membership in the face of broadened accessibility.

Long-time members have complained of lack of community cohesion compared to the early years of only a few hundred participants, many of whom met frequently in person.

This organizational backdrop, coupled with community-produced content defines the online places of SeniorNet and resonates with what Hine identified as “the intense awareness which web developers have of the territory of their own web sites, and the spatiality which stems from the differential connectedness of sites” (2000: 105). The primary role of the organization is in creating a place and a boundary of interaction much like that of a municipality providing a park for community use. They maintain the facility and provide some general parameters, but uses are defined by the community itself. SeniorNet sites are clearly differentiated from other areas of AOL and the web at large. There are links to other sites, but no overlapping content, and people who post on SeniorNet know their posts are local to the site. In the case of the web, the site is produced and maintained at the SeniorNet offices, and SeniorNet maintains control of all the content. In the AOL case, SeniorNet has an agreement with AOL to have an area within the AOL discussion area devoted to SeniorNet. The technical building blocks on both on the web and AOL are relatively simple. The communicative capabilities are for real-time chat and for member-created bulletin boards. In addition, there is a small amount of content that is generated and posted by the organization itself. Most of the content on the SeniorNet sites is generated by online hosts and members, unlike commercial sites that focus on professionally produced content. Marcie Schwarz, the staff member overseeing SeniorNet’s online sites, describes this as a self-conscious policy on the part of the organization. Schwarz encourages volunteer hosts to take responsibility whenever possible. Although community members do turn to her occasionally to mediate disputes, she encourages them to resolve their own problems and define the content and norms of their community. She explains:

On our site, the goal has always been to encourage active participation. . . . We thought that we were creating a structure for an online community in which they could collaborate and support one another. That has been our objective. I think people see that it's a place [to go] if they want to get more than just information like on a search engine.

The nonprofit status of SeniorNet and its philosophy of community empowerment are key factors in the distinctive character of the online sites. Staff point out that volunteer help has been an ongoing necessity because of limited funds. While this could be considered a limitation, it has created a sense of community ownership that has enabled a sense of solidarity and personal investment among community members.

SeniorNet produces the multi-layered relationships that we associate with communities and localities. People interact on a daily basis a communal space, recognize

each other, discuss the personal events in their lives, find friends and even spouses online, organize holiday travel together, and gather frequently in face-to-face meetings that they call “bashes,” where people fly in from all over the country. What is unique about this community is that it is not geographically localized, and it is driven by and supportive of age-based affiliation. Schools and workplaces are powerful institutions that organize age cohort identity in geographic locales, but for retired seniors, there are relatively few geographically local institutions through which to affiliate with other seniors. The infrastructure of the Internet, combined with the efforts of the SeniorNet organization and volunteers in architecting the online site, creates a place, a network locality, which grounds a diffuse form of affiliation and enables an intentional community. These are not imagined communities of affiliation, but actualized ones, localized communities founded and driven by the force of certain imaginings.

Some of the current buzzwords in the Internet industry are “narrowcast” (in contrast to broadcast) content and distribution, and “vertical communities,” trade communities that are targeted to specific professional interests. While it is only recently that these kinds of niche network communities have been gaining momentum in the mainstream, the Internet has always been a medium for the organization of small-scale groups that are spatially dispersed. The original populations of the Internet were dominated by vertical academic and government communities with focused professional interests. Academics are an ideal population for net based organization in that they are literate, usually spatially dispersed and isolated, and yet require strong ties with a tight-knit group of others in their field. SeniorNet collaborates with other niche net groups such as LatinoNet, Net Noir, and Planet Out that help organize around certain identity or demographic categories. These sorts of groups are particularly valuable when there isn’t a critical mass of similar people in a particular geographic locality.

This isn’t simple social and cultural reproduction through the new medium of the Internet. Although what is happening online is inseparable and grows out of offline social categories, these categories are being differently materialized through new technology. Having an online presence is a process of representation that mobilizes and positions the social groups in question in different ways.. For example, in Miller and Slater’s study, they described the ways in which Trinidadians set up websites as a process of representing Trinidad in a transnational arena, as well as a way for fellow Trinidadians to connect and keep in touch with each other (2000). In SeniorNet, a senior identity was performed which challenged the technophobic stereotype and invited other seniors into this different version of seniority.

Implications of these processes extend beyond the internal dynamics of the online groups. Our work stressed how SeniorNet challenges the technophobic stereotype, and creates new social ties and opportunities for seniors. At the same time, SeniorNet is also related to weakening ties to geographic places. SeniorNet is customized and optimized

for a particular demographic group, rather than being a more socially heterogeneous space that one might find in say a traditional neighborhood. SeniorNet enables seniors to avoid the riff raff in the world (and Internet) at large. In this sense, SeniorNet shares features with gated senior communities, where age cohort affiliation is driving niche localization within geographic space—a kind of de-localization from other geographically proximate groups.¹⁰ Whether we consider this an example of intergenerational alienation, or an example of an empowered move by a marginal group, groups like SeniorNet produce and reinforce social and cultural difference and boundaries as much as they bring together dispersed people in new bonds of solidarity.

SimCity 2000 and Hacker Identity

In her discussion of children's media, Ellen Seiter describes the US media industry production of an opposition between children's culture and adult culture as a market segmentation strategy that promotes solidarity among children around certain products and media content. She describes how children's commercials "bind children together as an audience defined in opposition to adults—by encouraging a social identity based on age, by ridiculing and inverting the values of adult culture" (1995: 143). It is not just seniors, academics, and activists who are producing new and powerful kinds of cultural contexts and identities through new media networks. Like the production of a technically empowered version of senior identity through SeniorNet, media networks produce differently empowered versions of childhood, and solidarity among children that can work against multi-generational relationships. The social lives of children are changing dramatically through the combination of new media such as the Internet, as well as the growth and segmentation of the children's media industry as a niche commercial market. The dynamic between geographically local contexts such as the family, peer groups, or school, and distributed and technological mediated social relations with media producers and marketers is becoming a defining one in the lives of children in the US.

Studies of Internet communities have been conducted in a separate analytic space from ethnographic studies of mass media, which have tended to look at geographically local sites of media reception rather than media audiences as networked social groups.¹¹ Unlike audiences of commercial media, Internet communities reproduce many objects of traditional ethnographic research. Despite geographic dispersion, people gather in communal spaces, engage in conversation, and develop shared social practices and rhythms. Audiences of non-interactive media pose a challenge for ethnographers seeking local and observable sites of interaction, exchange, and community. One ethnography working across this divide between online interaction and media studies is Hine's study of web pages and newsgroups devoted to the Louise Woodward trial. She suggests looking at "cyberspace as composed of texts, rather than being interactive" and conversely, "a text could be thought of as a temporally shifted and packaged form of

interaction” (2000: 50). A further divide, however, is the difference between distributed and centralized content production. Unlike newsgroups and many web sites, the mediation of broadcast and distribution apparatuses of media industries severs most direct ties between audiences of television or commercial software consumers. Nonprofit community sites like SeniorNet are perhaps curiosities in the terrain of digital media, dominated by commercial interests. Despite these differences, both SeniorNet and children’s media industries are implicated in the production of age cohort identity and network localities that support this identity. Here I work to trace continuities between different media forms and audiences by highlighting related dynamics in niche affiliation. I present a case of niche affiliation through a software product, SimCity 2000.

Following up on its 1985 hit computer game, SimCity, the software company Maxis upped the ante on simulation games with the release of SimCity 2000 in November 1993, following a \$1 million development investment (Darlin 1994: 300). Unlike the original SimCity, SimCity 2000 was the work of a large production team, and integrated the suggestions of hundreds of fans who wrote in asking for new features (Dargahi and Bremer 1995: 337). While SimCity broke new ground by presenting an innovative model for a computer game based on world-building simulation, SimCity 2000 pushed the envelope on complexity and multimedia. It capitalized on capabilities of new personal computer platforms, incorporating 3D graphics and animation, advanced music and sound effects, new public transit systems, a water system, hospitals, schools, and a complex new economic system (Dargahi and Bremer 1995: 396). Both SimCity and SimCity 2000 were hit products in the competitive computer game field, earning Maxis millions in revenue (Darlin 1994). The games have spawned an active subculture, with Usenet newsgroups, competitions, numerous publications, and even networked versions initiated by a loyal user community. Currently, SimCity is in its fourth incarnation with SimCity 3000.

SimCity 2000 is both authoring tool and interactive game. It provides a responsive virtual environment equipped with tools for users to build and administer a virtual city. The primary interface window is a grid that can be rotated or zoomed in and out. Starting with a blank landscape dotted with trees, water, and hills, the player chooses different tools from a toolbar running alongside the screen, building, bulldozing, and zoning. In addition, informational windows that report on population, educational levels, pollution, industrial growth, and city budget, among many other factors. The basic progression of the game revolves around building roads, zoning districts, and providing city services such as power, water, schools, parks and libraries. In addition, the player must make decisions about budgeting: taxes, city ordinances, and allocation of funds. If zoned and administered properly, "Sims" (simulated people) will populate the grid, creating their own buildings and voicing their opinions through the city newspaper.

The user plays the role of mayor of the city, and receives rewards for good governance and population growth, such as a mayor's house, a statue, or a spontaneous parade. The system promotes a model of expansion and growth through rewards around achievement of population levels, but parallel and sub-goal structures exist in the game, including ecological and economic balance, community relations, and aesthetics. Since SimCity 2000 foregrounds user-authoring, it is less a game driven by a specific goal than a structured space of possibility for the user to explore. Subverting linear growth scenarios are disasters that can be turned on and off, including fires, floods, and space alien invasions. The algorithms underlying SimCity 2000 rely on cellular automata¹² techniques, creating an impression of lively growth, interactivity, and change—a sense of the city as a living entity. Construction sites change to small buildings, which are in turn torn down to make space for a large shopping mall or a stunning skyscraper. As the population and transportation network of the city grows, ant-like cars start flowing frenetically across highways and roadways, and planes and traffic helicopters fly across the cityscape, occasionally crashing into a tall building and maybe even starting a fire.

Will Wright and Jeff Braun, founders of Maxis, avoided the label "educational software" for SimCity, believing that "people have a low opinion of educational software" (Wright in Barol 1989: 64). The SimCity 2000 sourcebook bills the game as "entertainment/educational software" (Dargahi and Bremer 1995: 4). At the same time, Maxis supported the use of SimCity in educational contexts, producing teachers manuals and activity books for schools. In 1997, Maxis was bought by Electronic Arts, the primary producer of action and sports computer games, and they have abandoned efforts in the children's and educational market. But until that time, Maxis had a division that specifically worked on children's titles, and on educational framing other Maxis titles. SimCity 2000 is a rare instance of a cross-over hit that did well in both the entertainment and education markets, winning rave reviews from educators (Eisler 1991, Jacobson 1992, Paul 1991) as well as attracting a wide following among the computer gaming community as a whole. The game has also been reviewed extensively in the popular press (eg., Barol 1989, Schone 1994). Maxis recognized the legitimizing aspect of the educational market, while catering to the economic strength of the entertainment market.

The multiple audiences for the game doesn't mean, however, that the game integrates both entertainment and educational in a consistent way, but they exist as somewhat contradictory possibilities for game play. In addition to the different modes of "legitimate" play, SimCity 2000 embodies hidden functionality accessible by "cheat codes" that a user can type in to change game parameters. Cheat codes are a well-known feature to experienced computer gamers. With the advent of the Web, these backdoor codes are easily disseminated among gaming communities. A quick search pulls up dozens of web pages of hints, tips, and cheats. "Easter eggs," one particularly coveted form of cheat code, is defined on one SimCity 2000 web page as "a pre-programmed,

hidden and undocumented feature inserted by the programmer for their own enjoyment." In the world of computer game fandom, undocumented is clearly relative, and cheat codes are featured on even the official Maxis web page, albeit with a disclaimer:

We do not advocate the use of cheat codes, as playing legitimately will lead to a far more stable and enjoyable city building experience. We are providing these cheat codes solely as a service to you. We will not discuss these codes further on the phone. We do not guarantee that they will work for you. We will not discuss problems with any city in which you have used a code-- once you use a code, all bets are off, and you're on your own! (<http://www.maxis.com>)

Maxis capitalizes on the flexibility of computer technology in catering to heterogeneous users and use situations. While the dominant marketing pitch is one of a constructive and educational simulation, the designers and a wired fan community have successfully smuggled in a myriad of alternative readings, including special effects of destruction and easter eggs for localized and customized forms of game play.

In my interview with Will Wright, the creator of the original SimCity, he described the cheat codes in SimCity 2000 as a way to transform the software from a game with a goal structure, to a toy, more like a construction kit. In other words, he consciously saw the codes as enabling alternative forms of game play. He also described how game producers use cheat codes to generate buzz about a game. Buzz is a marketing tool, even if it means subverting the goal orientations and rules embedded in the game design. In other words, cheat codes are a community building device. Cheat codes cater to fans and technically savvy hacker communities, who remain an important audience despite the mainstreaming of the computer gaming market. Wright describes how in the early days of computer gaming, hackers would race to break the copy protection of a new piece of software. A similar niche community is also involved in cracking the cheat codes in current gaming software. "They'll break through the code. They'll disassemble the program. It's incredible. We came out with SimCity 3000. People within a week had discovered all the cheat codes by digging through the code."

SimCity grows out of and enlists an extremely varied set of producer and consumer communities, and embodies these contradictions within the design of the game. The positioning with both educational and entertainment markets, the use of cheat codes and easter eggs, and a double talking web page are all indicators of this. These features of SimCity are common to any media artifact with a large and diverse set of fan communities, but because of its status as digital media, SimCity is an even more flexible object. Players can also buy the SimCity2000 Urban Renewal Kit (SKURK), which allows players to go behind the scenes, designing their own buildings, scenarios, and circumventing other game limitations. These SKURK creations are published and

distributed on hundreds of web pages on the Internet, including Maxis's own. Instead of only interpretive flexibility, consumers are also handed functional flexibility and the ability to author radically different narrative terms through their game play.

During my graduate studies, I was a participant and fieldworker at a network of afterschool clubs around the country, where kids work with undergraduate tutors in computer activities (see Cole 1997), including SimCity 2000.¹³ In the California site that I will be looking at here, SimCity 2000 was a particularly attractive object. One child, a nine year old boy whom I shall call Ian, formed a special attachment to the game, quickly becoming an expert, cajoling his parents into buying a copy at home, and refusing to play other games. Ian's attachment to the game emerged as a problem at the club, as he was neglecting his duties to help other kids and test out new games. One instance of his play, which we have captured on videotape, is particularly illustrative of Ian's investments in the game which call out the multiple possibilities of game play, and construct Ian's identity as a particular kind of child through his relationship with the game.

The scene opens with Ian sitting in front of the computer with another boy, working with a large city. An audience of other club participants, including the videotaper, undergraduates, and other kids and adults walk in and out of the scene. He busily makes a railroad system, water pipes, buildings and a power plant, and worries about whether his people are getting enough water, or whether power plants need to be replaced. After about twenty minutes, he is interrupted by the director of the club and asked to teach a new undergraduate how to play the game. "I'm not kidding either," the director stresses, "her grade depends on what you teach her, so she'd better do a good job, okay?" After a few moments, another boy suggests, "Show her a disaster. Do an airplane crash." Ian responds with enthusiasm, saves his city, and announces, "Ha ha ha disaster time!" Disaster time involves an escalating series of special effects in which the city is first invaded by a space alien, then flooded, set on fire and subjected to an earthquake and plane crashes. After the city is in flames, Ian begins to build large buildings within burning areas, to induce more and more spectacular explosions. He turns from blowing up the most expensive of the possible buildings to blowing up colleges, fusion plants, gas power plants, and microwave power plants.

After Ian is displaced from his burning city at an adult's insistence, he starts a new city for the undergraduate, and they work on it for the remaining forty minutes on tape. Ian returns to construction mode, building buildings, power plants, the mayor's house, a railroad, and a subway system. He begins this new city, however, by typing in the cheat code that gives the player unlimited funds and opens access to all of the special buildings such as space-age buildings, the mayor's house, and high tech power plants. He thus circumvents the game parameters that demand attention to fiscal responsibility and gradual urban growth. The game is transformed from an urban planning exercise to a palette for the free construction of any desired elements. Ian spends his time with the

undergraduate showing her the most spectacular buildings and constructing a meandering subway system with no apparent function. Other children at the club form an appreciative audience. The adults at the club are in an uneasy position of trying to validate Ian's technical expertise, but not wanting to reproduce the action entertainment content of Ian's destructive scenarios. They are foiled by the content of the game that has these capabilities as a hidden interactional resource. The result is that Ian's subjectivity gets produced as a countercultural one in relation to educators' expectations, and one that enlists other kids at the club, who also relish subversion of these expectations.

In my initial analysis of Ian's game play, I saw him as a resourceful nonconformist and subversive, talking back at the dominant educational goals of the club, and freely appropriating game content and club structure to play by his own set of rules. I saw him as a child who had trouble fitting into structured and communal frameworks. At the level of the geographically local, this perspective may be largely a valid one. Ian is seen as a problem child at home and at school, and at the club, adults are constantly intervening in and redirecting his play. He has been diagnosed with Attention Deficit Hyperactive Disorder, and at home his is subject to a behavior modification schedule. However, in relation to the social and economic network of Maxis, SimCity fans, and gaming industries, Ian's play looks like an act of affiliation as well as an act of rebellion.

What does it mean to consider Ian's game play in relation to the malleable technology of SimCity 2000, and a trans-geographic production/consumption network? Within the afterschool program, blowing up buildings is a subversive activity, going against the educational goals of the club and the orientation of SimCity 2000 as it has been widely marketed. Yet opportunities for destruction have been anticipated by the designers of SimCity 2000, and coded into the game, citing well-established idioms of action gaming. Behind the backs of the educators, game designers have mobilized a powerful counter-narrative that enlists computer savvy kids at site. The game and the Internet give Ian access to subcultural but powerful adult communities who provide resources to validate a subjectivity and practices in opposition to educational goals and the adults at the site. Ian's play with the alternative functionality of SimCity builds relationships with other kids as well as fan communities and game designers with whom he doesn't have a direct interpersonal relation. Will Wright, cheat codes, and other SimCity fans are resource for Ian to produce an alternative subjectivity and social network that can stand up to the demands of adults at the club. At one level, this case is about familiar antagonisms and fault lines between children and their adult oppressors, as children struggle for autonomy within adult-run institutions. But in this long-standing power struggle, a new interlocutor has entered the mix, handing the children new resources and sources of solidarity.

Ian builds affiliations through the mass media object, but in the process, also shuts out relations to his geographically based community, whether it is school, the club, or his family. Though socially alienated in his geographic community, he finds a different

palette of affiliations through networked sociality. Appropriation of meanings inherent in a mass media text does not only mean contextualization by the geographically local context, but it also means a partial escape from that context. Like the seniors in SeniorNet, media networks enable Ian to develop forms of identity, knowledge, and affiliation that are not readily accessible in his geographically local social networks. SimCity 2000 and related media support a niche identity that becomes relevant in Ian's geographically local community, and yet is contextualized primarily by the network locality and a particular cut of SimCity 2000 consumption and production. The infrastructure for this network locality includes the capitalist apparatus of development, marketing, distribution and retail as well as the Internet infrastructures supporting the fan communities on the net. What is different from network communities is the nature of this infrastructure as well as the anonymity between most players.

When malleable and targeted computational media are common resources in our everyday lives, they can support the growth of localized forms of network affiliation that enable specialized and perhaps extreme forms of knowledge and identity. This means that people have greater access to specialized knowledge and interests, and this is the exciting part. It also means that behaviors that might be considered antisocial in a geographic community, controlled by institutions such as families and schools, can be validated and find a place within new network localities that often span different forms of media such as television, print, games, and the Internet. Unlike a community like SeniorNet, these more commodified forms of network affiliation locate relatively little responsibility or power on the part of most participants. Cycles of reproduction are located largely outside of the user base, in capitalist production, reproduction and distribution. Affiliates are largely anonymous to each other, despite a sense of solidarity. While I don't want to suggest that these forms of affiliation are the defining ones in new intertextual localities, there are vulnerabilities inherent in these dynamics of localization.

Conclusions

By calling attention to localizing processes in two network localities, this paper has teased apart the often automatic associations between geography, place, affiliation, and proximity and suggested that these characteristics might also apply to domains that we think of as diametrically opposed—the virtual, media flows, and geographic dispersion. I have traced how technology access has inflected age-related identity and localized it in shared media infrastructures, practices and imaginings. My interest, too, has been local: local to an idiosyncratic ethnographic background and parochialized to a particular focus on relatively elite, mostly recreational, and uncommonly technologized contexts. Access to digital media is a privileged status, but one that might just as likely result in greater parochialism as it does in greater cultural hybridity or cosmopolitanism. Those that are empowered through new technologies to seek others that are more like themselves seem

quite likely to do so, whether it is intellectual elites, hackers, or wired seniors. If I had looked at the technologically disenfranchised, or institutions such as school, work, or nation, the view certainly would have been different. I have not meant to argue against analytic attention to villages, nations, cities, geographic communities and the subjectivities tied to these locales. Rather, I have attempted to stress continuities and specify differences between these and digitally mediated forms of localization.

I have argued that the contrast between global flows and local place and identity is the wrong starting point for approaching new media technologies. Rather than being a univocal force of globalization, digital media is both produced by and productive of localized social relations and interests. I have pushed for a shift in analytic focus from global/local dynamics, to localization as a dynamic that cross-cuts this dichotomy. Working across this dichotomy means seeing localization not only in processes of resistance to or appropriation of the global, but as a productive process that strengthens and newly inflects existing contexts of affiliation. The imagination is being mobilized as a constitutive social fact (Appadurai 1996: 3) that creates new identities and localities, in part, through its embodiment in digital media. Whether through the Internet, commercial media, or geographic regionalism, locality is being produced through ongoing affiliation, technology and place-making. This means recognizing constraints and materialities in the face of the seemingly endless proliferation of choice, identities, and affiliations. What looks like hybridization from the point of view of geographic regionalism could be taken as purification from the point of view of other identity constructions. Localities of all forms require time, capital, stable infrastructure, effective architecture, and social commitment to be actualized. While I can't claim that network localization processes are more potent than forces of globalized homogenization or more traditional forms of localization, I have attempted to at least demonstrate and illustrate their possibility.

My goal has been to suggest avenues for inquiry that hold onto ethnographic commitments to situated research, while taking seriously the flows of people and culture and the interconnections between places. I have proposed the flexible object of locality as a lens for working in this space, a move that approaches the problem of ethnographic authority from a somewhat different angle than calls for grounded fieldwork or for the importance of anthropology's culture concept. I have argued that technology as it mediates and materializes culture and social relations is a crucial object for ethnographic attention, and I have drawn on science and technology studies, particularly studies of network communities, as sources of inspiration and theoretical capital. This has meant holding onto a situated and local view of culture and sociality, while approaching different kinds of ethnographic objects, defined not by geographic place and physical co-presence but by solidarities and identifications that cross-cut geographic territories. Seeing the identity of ethnographic sites and objects as unbounded, extroverted, dynamic, and heterogeneous does not mean abandoning a commitment to grounded fieldwork,

ethnographic detail, and attention to local contexts of meaning. My effort is exploratory and illustrative rather than programmatic or definitive. I see study of networked localization is one way of contributing a uniquely anthropological voice to the interdisciplinary debates on globalization, but one that does not foreclose possibilities for anthropological theorizing on a systemic scale.

An anthropological vision of locality is energized by challenges presented by digital media. The picture that emerges is that locality—as defined place as well as meaningful context—remains robust, but the players that contribute to it can be impersonal, technological, and spatially dispersed. Denaturalized from association with geographic place, locality is unbounded and dynamic, an ongoing partial achievement that never exhausts possibilities for affiliation and solidarity. At the same time, it is grounded in particular social practices, materialized texts, placed infrastructures and architectures. In the end, the distinction between network and geographic locality should prove unnecessary, if locality becomes viewed as a dynamic production involving materials and actors located in multiple ways. All localities are ultimately hybrids of geographically and technologically placed connection. The interaction between and interpenetration of technologically and geographically placed identities and practices emerges as a crucial object of inquiry. Without taking location for granted, we need to query and identify what these meaningful networks and localities are, and trace the fault lines of affiliation that are emerging from the ongoing movements of people, technology, and texts. We will undoubtedly find these fault lines articulated in relation to existing ones, whether they are gender, race, nationality, or age, but we should also expect that these networks would also be generative of unexpected places, affiliations, and imaginings.

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² Some reviews of this area of study can be found in Clifford (1997a: 7-1), Feld and Basso (1996a), Marcus (1998: 79-99), Ong (1999: 8-16).

³ It is beyond the scope of this paper to engage fully with current debates about anthropological method and disciplinary identity. Rather, this paper is an effort to reconcile some tensions in these debates by suggesting ways in which study of new technology and “global” phenomenon can still embody a local focus and virtues of “traditional” ethnography such as engaged fieldwork (Clifford 1997b, Mintz 2000) and attention to local knowledges and lived experience (Englund and Leach 2000). This paper brackets the question of how anthropology can be reformulated for the study global systems (see, for example Appadurai 1996, Hannerz 1996, Marcus 1998), and focuses instead on a strategy for recasting existing anthropological strengths.

⁴ In his paper on “The Production of Locality,” Appadurai rereads traditional ethnographic subjects, such as ritual processes and agricultural practices in terms of how they work to produce localized subjects and neighborhoods. Locality is an “inherently fragile social achievement” (1995: 206) and “small scale societies do not and cannot take locality as a given” (p. 205).

⁵ Some of the first work looking at cyberspace as a unique social and cultural domain are included in (Benedikt 1992). Shortly thereafter, a number of publications defined Internet communities as a new domain for social and cultural study (Allen 1996, Cherny 1995, Cherny 1999, Jones 1998, Rheingold 1993, Turkle 1995). Since then, there has been an explosion in work on the topic, well beyond the scope of this paper to review in detail. For a more complete review of this literature, see Hine (2000: 2-20).

⁶ Although not generally framed as instances of network communities or localities, a wide variety of ethnographic studies of trans-geographic, localized affiliation complement the approach taken in this paper. For example, studies of scientific communities have often included trans-geographic and transnational dimensions (Fujimura 2000, Fujimura Forthcoming, Heath 1998, Helmreich 1998, Traweek 1988)

Similarly, studies of diasporic groups (Clifford 1997a, Ong 1999) and workers in multi-sited corporations (Hakken 1999, Newman 1996, Schwarz 2001, Suchman 1994) describe localized affiliation that spans geographic space. From a related angle, in her discussion of “the global traffic in human organs,” Nancy Scheper-Hughes describes transplant surgery as part of a global network, but “At the same time, the social world of transplant surgery is small and personalistic; in its upper echelons it could almost be described as a face-to-face community” (2000: 192).

⁷ This move puts me in the company of many theorists who have invoked the term “network,” as in actor-network theory (eg., Callon 1987, Latour 1987), Manuel Castell’s “network society” (Castells 1996), or Barry Wellman’s social network analysis (Wellman 1999). It is beyond the scope of this paper to fully engage with these uses of the term, but what distinguishes the approach of this paper is an anthropological focus on networks defined by local knowledge and cultural identification. I draw on actor-network theory for inspiration in thinking of the distributed and materialized connections that link people and artifacts.

⁸ I separate the terms analytically, but I see place, locality, practice, and affiliation as inseparable and co-constitutive. This paper is informed by theories and ethnographies that describe place as a socially distributed and extroverted process (eg., Feld and Basso 1996b, Massey 1994, Raffles 1999, Rodman 1992). Margaret Rodman has critiqued the tendency to see place as the setting for action rather than itself a socially constructed phenomenon. “The problem of place arises, paradoxically, because the meaning of place too often seems to go without saying” (1992: 640). Similarly, my analytic stake is in calling out the salience of place in networked social life. Place-making is an instance of localization. One difference is that where geographic settings are unremarkable and assumed, in network contexts, often only the displacement from geography is noted without the concomitant assumption of re-placement. Localization is a process that is materialized and parochializing but often spatially unbounded.

⁹ The material on SeniorNet is drawn from collaborative work with Annette Adler, Charlotte Linde, Elizabeth Mynatt, Vicki O'Day and the SeniorNet organization, and is drawn in part from team publications (Ito et al. Forthcoming, Mynatt et al. 1999, O'day et al. 1999). We interviewed staff members, observed online activity on the Web and on AOL through the one-year duration of our fieldwork, attended classes in three Bay Area learning centers, and interviewed twenty online community members and Learning Center students. The interviews were conducted primarily via phone, though we interviewed three members in person and one via online chat. We observed sixteen classes and conducted nine follow-up phone interviews with students at the SeniorNet Learning Centers. We also observed a variety of roundtables and created a roundtable of our own for discussing our research with community members.

¹⁰ I thank Joan Fujimura for alerting me to this point.

¹¹ Ethnographies of media audiences describe how seemingly globalized media forms are actually localized phenomena, and how national contexts and sites of reception crucially inform the actualized meanings of a text. Although focusing on geographically local sites, this work complements the approach taking here in localizing and specifying the contexts and effects of media. These efforts include studies of television audiences (Abu-Lughod 1995, Ginsburg 1994, Mankekar 1999, Morley 1992), fan communities (Jenkins 1992, Penley 1991, Tulloch and Jenkins 1995), and novel readers (Radway 1991), to provide some examples from a growing body of work.

¹² Cellular automata (CA) are a computation method developed by John Von Neumann and Artificial Life scientists in an attempt to mathematically model a self-reproducing automaton (Helmreich 1995: 69-71). Cells on a grid change states in cycles, in response to states in neighboring cells.

¹³ I was part of a large three-year project funded by the Mellon Foundation to document and evaluate the Fifth Dimension project. The focus of our piece of the evaluation, conducted at the Institute for Research on Learning, was to look ethnographically at learning processes. Fifth Dimension clubs exist primarily

across the US, with a few international efforts. They are based on activity theoretical principles of learning, involving undergraduate tutors from an affiliate university, elementary-aged children from the local community, computers running educational software, and a series of artifacts designed to guide children and undergraduates in their interactions with each other and the machines. Children are encouraged to orient toward educational goals of intellectual development, as well as engage in playful and fun activity with both other children and adults. The focus of our research was on two clubs in Southern California, and our club in Northern California, where team members shot videotape during most days of club operation for a year. In addition to the videotape, the analysis also draws from fieldnotes written by the undergraduate tutors, fieldnotes by our research team, and consortium-wide email correspondence.

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