The Network Communities of SeniorNet

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Abstract. With the explosion of participation on the Internet, there is increasing interest and speculation in extending its uses to support diverse online communities, and particular interest in using the Internet to combat loneliness and isolation amongst senior citizens For the past year, we have been investigating SeniorNet (SN), a 12 year old organization that attempts to bring seniors together via computer networking technologies. We found a rich tapestry of human relationships supported by various technical and social underpinnings. In this paper, we delve into the richness of an active community and describe the intertwining technical and social factors that make it valuable and useful for its members. An underlying question in these discussions is "If network communities have to be principally created and maintained by their members (as we posit), then how do designers help without getting in the way?"

Introduction

With the explosion of participation on the Internet, there is increasing interest and speculation in extending its uses to support diverse online communities (Hagel, 1997; Kiesler, 1997; Rheingold, 1993; Schuler, 1996). As a new communication medium that could potentially reach into many homes it seems a likely tool for connecting people, combating isolation and loneliness. One obvious target population for such endeavors is senior citizens, as they are entering a new stage of their life with retirement and are increasingly likely to be geographically separated from family. But senior citizens are typically thought of as technology naive, and even adverse to computer use, preferring traditional methods for their communication needs.

For the past year, we have been investigating SeniorNet (SN), a 12 year old organization that attempts to bring seniors together via computer networking technologies. A typical SN site has chat rooms and news group-like areas, called roundtables on the WWW and forums on AOL[1] on a host of topics. SN first started with Delphi in 1986. Currently they have nearly 20,000 members comprising thriving online communities on both America Online (AOL) and the World Wide Web.

In 1998 (Mynatt, 1998), we presented our observations on network communities. As researchers, designers, and users of MUDs and media space technologies, we pointed to the constellation of technical affordances and social requirements that comprise a network community. In our framework, we explored three design dimensions of network communities: supporting the rhythms of an online community, nurturing community development, and managing the real and virtual worlds. Following this work, we wanted to look at a new network community in detail. This motivation led us to our current investigation of SeniorNet.

We found a rich tapestry of human relationships supported by various technical and social underpinnings. Instead of exhaustively listing the ways that SN satisfies the conditions of a network community, in this paper, we point to the characteristics that we believe are particularly salient for the research community. One contribution of this work is that we delve into the richness of a active community and describe the intertwining technical and social factors that make it valuable and useful for its members. An underlying question in these discussions is *"What is the role of design in creating a network community?"* This question is timely as more and more businesses wish to use net communities both internally for their staff as well as externally for their customers. Many internet entrepreneurs see community

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1 For the remainder of this paper, we will refer to both roundtables and forums as roundtables

as the hook for their commercial web sites, while the population of the Net, their potential clientele, is rapidly expanding and diversifying.

We first provide an overview of the history and current organization of SeniorNet and describe our one-year case study. We then focus our discussions on three main observations of SeniorNet's network communities:

- Network communities exhibit a complex collage of interaction styles and rhythms. This richness enables the depth of expression needed to nurture multi-layered relationships (a key component of a community). In our previous work, we examined the rich interaction modalities available in media spaces with audio and video connections, graphical MUDs[2] as well as programmable text-based MUDs The building blocks for interaction in SN's network communities appear to be much more limited. Yet, we observed how SN members use various technical and social mechanisms combined with the basic building blocks of roundtables, email, and chat to create a necessary and sufficient set of interaction modalities to support community.

- One defining notion of network communities is of boundaries, the ability to sense a "groupness" about the members. This groupness is defined by identities and shared practices that have been created and nurtured over time. By "seeding" new sites (e.g. the recent Web site) with members of the community, SN has been able to transplant itself several times. The "groupness" of SN includes multiple roles and modes of participation that support a variety of needs within the community (e.g. hosts) and stages of participation (e.g. learner, new member, old timer) Although one obvious boundary to SeniorNet is that membership is limited to people over 50 years of age, this boundary is more opportunistic than defining. The community spans much more than "senior-like" identities and practices. This insight is important to those who want to start network communities defined by a demographic groups.

- In contrast to the hype surrounding the promise of anonymity on the Internet, SN is strikingly grounded in the real world, while still embracing the charm of fantasy in the virtual realm. SN members connect their virtual interactions to their "real," physical lives in many ways, strengthening the SN community. One perceived advantage to this virtual-real connection that may be surprising is it contributes to a sense of safety and trust. This observation is in sharp contrast to ensuring safety through

2. MUDs are computationally-based environments that provide access to a persistent, online "world"

anonymity. Although SN, is strongly grounded in the real world, the members also embrace the fun of virtual fantasy with online birthday parties and shared cups of tea.

In each section, we reflect on the role of design in creating network communities. If network communities have to be principally created and maintained by their members (as we posit), then how do designers help without getting in the way? As the majority of our research has been principally focused on net communities in the workplace (including educational settings), our discussions revolve around common themes such as peer sharing, informal learning and multilayered relationships that are important for all network communities. By examining this successful community, we both contribute to the growing consensus (e.g. Kollack 1996) about how net communities operate, as well as offer insights in how to sustain a long-term community and nurture a particular set of practices. One benefit of examining a net community in such rich detail is that this richness nurtures a designer's evolving intuition in addition to marking general design guidelines.

The SeniorNet community does not fall into a neat classification as a recreational community or a work community or an educational community. All of these endeavors are practiced on a daily basis. SeniorNet members *work* to accomplish their goals in a purposeful and meaningful fashion. These goals include planning gatherings, collecting diverse views on a topic, and attending to the needs of a particular member. As Internet access grows, we have the opportunity to understand collaborative practices outside of traditional work settings. As a long-standing community, SeniorNet is an excellent example of this growing form of computer-supported, cooperative work.

The SeniorNet Project

The SeniorNet organization was founded 12 years ago to help seniors gain access to computing technology. SeniorNet supports robust network communities on the Web and on America On-Line (AOL), and it sponsors over a hundred volunteer-staffed "Learning Centers" throughout the United States, where seniors can take computer classes on a variety of subjects, including how to buy a computer, how to use financial software, and how to get online.

A SeniorNet online site provides a multitude of communication affordances. Most prominently are the roundtables on a multitude of topics ranging from book clubs to WWII memories, including a Cafe for casual socializing as well as roundtables to support grieving. Both sites offer simple, real-time chat capabilities. Participants can register themselves with a user name, a password and other self

descriptions, with optional pointers to a homepages. Non-registered people can still post as guests although they cannot use chat. As we will discuss later, both members and non-members lurk as well.

For the past year, we have been engaged in an ethnographic study of SeniorNet We are interested in the issue of broad access to computing. We chose to study SeniorNet as a case of long-lived, successful computer access among a population which is not commonly thought to be adept at learning new technologies. The themes of our research have centered on understanding the social and technical features that support access and help people become fluent in online participation.

As SeniorNet is a distributed enterprise with activity in different online and physical locations, we carried out observations and interviews in a variety of sites, to develop a better sense of SeniorNet's membership and practices than any particular location could provide. We interviewed SeniorNet staff members, observed four classes at three Learning Centers, observed online activity in discussion roundtables both on the Web and AOL over a period of months, participated in chat regularly on the Web for a week, interviewed 20 members drawn from both network communities, and interviewed 9 students from two of the classes we had observed. We also posted questions and research themes on an online roundtable created for us by the SeniorNet staff, to generate discussion among members on topics of interest to the project.

We have research findings in several areas, including access issues, network communities, online fieldwork practices, and learning to become a Net participant. In this paper, we focus on the combinations of social practices and technological affordances that have supported these long-standing network communities.

Rhythm and Other Communication Patterns

In (Mynatt 1998), we discussed the importance of predictable rhythms in supporting social interaction in network communities. Our observations suggest that communities are more enduring when people know when and how they can find others online and can structure their participation to match. Learning to sync up to the prevailing style is part of becoming a member of the group.

Generally a network community does not have *one* prevailing rhythm, but instead is made up of a myriad of communication possibilities and social practices, each with a distinctive rhythm. From daily interactions that build into social routines, these patterns of interaction are the basis for rich, multi-layered relationships in network communities.

Predictable Rhythms

One clear observation of SN is that it relies on many *predictable* rhythms. Predictability is necessary to support a feeling of connection (Kiesler 1997). A change in the predictable rhythm might mean a temporary technical problem or it might mean that someone is experiencing social problems—either way, participants notice changes in the pattern and can often account for them. These observable patterns lead to a more robust sense of community where people can work through occasional glitches. The technology must be reliable enough for these rhythms to develop, but then, when the patterns are in place, technical problems can often be understood and tolerated. For example, inhabitants would remark that the chat server was down even if it appeared to be up and empty, if this happened at a peak time when regulars should be present

The same effect holds for a change in personal rhythm, such as when a regular poster temporarily disappears. When these situations occur, others notice, and they may monitor the absence or check up on the missing person through other means. For example, the overall mood of the "Living with Cancer" roundtable on AOL is one of an intimate support group with a small number of regular members. Absences and reappearances of regular members were often noted since an absence may indicate surgery or illness. For example, one person posts "Wondered where you were! Glad you're fixed up and back with us now" [3], or another posts "Sue, I'm so glad you're all right. I was worried about you". Lapses in postings are also noted, for example: "I miss all of you... where did you go" (Amenta), during a one day lapse in postings. Similarly, John notes a four day lapse: "Where did everyone go? No postings since the 14th."

Range of Communication Affordances Needed

The SeniorNet case reveals a wide range of interactional rhythms across the different arenas for participation Chat rooms feel different than discussion roundtables, of course, but also each individual discussion roundtable has its own conventional pace and style. Participants have their favorite places to be, and no one interacts in all of the possible settings. But many participants have several favorite places, and they adjust to the rhythms of different groups as they move among them.

SeniorNet roundtables vary in topic (books, religion, health issues, history and policy, social chat), tone (intimate, informational, joking), frequency and volume of postings (from tens of messages each day to gaps of several days between single

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3 In this paper, we have attempted to contact everyone whom we have interviewed, or whose on-line posts we have used, to give them the option of using real screen names or pseudonyms when quoted When we have been unable to contact people, we have quoted their material with pseudonyms or no names.

messages), and media used (text, color, graphics). Together, these differences contribute to a high level of expressiveness and a distinctive character for each group. For example, the SeniorNet Cafe on the Web is a high-volume, chatty place, with approximately several hundred messages a day where posters go to see and be seen. It is a kind of centrally-located watering-hole for SeniorNet on the Web. By contrast, the AlAnon group on AOL is a place for relatives of alcoholics to gather and share long stories and mutual encouragement; the postings here are often separated by many hours or days, and the tone is both serious and supportive.

This range of communication choices is useful in supporting the diverse needs of a community. It seems to us that one reason SeniorNet flourishes is that people can bring many facets of themselves to light—they can involve their "whole selves" in the SeniorNet community if they wish. It is not just a place for talking about professional or intellectual interests, hobbies, family crises, or physical ailments, or for talking in the daytime or in the middle of the night, or for quick chat or long, thoughtful debate—it can be all of these. People seem to draw on what they need and want at different times and diverse members can choose among the various options. Such a range of expressiveness helps people get to know others whom they are not interacting with face-to-face. The online technologies do not mimic face-to-face interaction at all, but they are rich enough to allow people to say different things differently.

Range is also important to support change within the community. SN oldtimers often mentioned that their needs and thus their participation had changed over the years. A likely path is starting with a light-weight roundtable such as the Cafe, dabbling with chat for a bit and then, in turn, concentrating on different roundtables. One AOL participant describes her path:

> "I have been a member of the Seniornet community for 7 years Many of those I originally met here are still active members. At first, it was the community center (chatroom) that interested me It seemed to me magical to be able to chat with people across the nation, and indeed become quite close to them I feel like it is a cocktail party with a variety of topics going on, and light social chitchat After a year or two, I found the forum more interesting ..primarily because topics of more depth could be discussed, and it permitted time for reflection I now participate in half-a-dozen of the message areas and rarely go into the chatroom "

Two Modalities, Multiple Practices

The SN members have taken up the two principal communication modalities, roundtables and chat, and created a rich a diverse set of shared practices. Within roundtables, we first noticed that people frequently made "off topic" remarks, with the tacit approval of their fellow community members. Initially, it seemed to us that virtually nothing could be considered off topic—personal greetings showed up in

the book group, and complaints about junk phone calls showed up in the technical support group (and were followed up by constructive suggestions). But as we looked more carefully, it was clear that the practices of each group do steer people to certain forms of expression more than others. For example, both the SeniorNet chat room and the SeniorNet Cafe on the Web are lively social gatherings where light-hearted talk prevails. Few people discuss serious or troubling issues there, and one member commented that she goes to a particular roundtable to "dump" when upset, rather than the Cafe, though she is a well-known "regular" in the Cafe.

Participants develop a sense of what is appropriate in each setting, according to its rhythm and other features. Although there are only two public SeniorNet chat rooms, one for the Web and one for AOL, they feel different at different times of day. In the evenings a large and cheerful group gathers to talk, and in the mornings a smaller, much quieter crowd appears. People either sort themselves into different temporal groups according to their own preferred social styles or they adapt to the patterns in effect at different times. An AOL chatter described the chat crowds this way:

> "I've discovered that, like on America OnLine Senior Chat, there are certain people that usually go on at certain times There's a morning group, an afternoon group, and then an evening group And they're all entirely different, for the most part, different people, and they have different interests The evening people are, the late evening people, are very much into Singles' kinds of things and flirting on the Net, and that. And a little bit of whatever And that's not true so much of the morning. The morning people are a different group You very seldom have a group come on at six o'clock in the morning and say, "Let's all jump in the hot tub " Whereas that's a very common practice at, say, twelve o'clock at night And I'm not a hot tub type person, so I don't, so I prefer the morning crew. Not that I have anything against their fantasies, but that's, it's just not mine."

The differences between the Cafe and AlAnon or between morning chat and evening chat do not stem from any official rules, nor do they emerge from technology differences. The character of each place is developed through its own particular social patterns and conventions. Sometimes these conventions are implicit, as in the example of the Cafe regular going elsewhere to tell SeniorNetters about her troubles, and sometimes they are explicit. For example, some groups agree that graphics should not be used in their postings, because not everyone has the right software or modem speed to be able to see them. There are roundtables dedicated to sharing graphics, for those who can see and use them.

Technology Affordances

Though technology cannot account for all the differences in social rhythm, it does have a strong impact on expressiveness. Some modalities, such as chat, require participants to be co-present, and others, such as roundtables, allow participants to

be far apart in time as well as space. The use of color in text is heavily used in Web messages, and it was quickly appropriated by AOL members when it became available to them part-way through our study.

Color interacts in an interesting way with the high volume and multi-threading of some groups. Some members use the technology affordance of a virtual "notepad," that they keep open for note-taking while reading a stream of messages. Then they post a bundled response with specific replies embedded within. Color is often used here to distinguish the embedded messages in a bundled note.

In a sense, the particular technologies available for network communities are not the most important—the human infrastructure is far more crucial. There are examples of long-lived network communities built on very impoverished technologies. But even if members would make do with whatever building blocks they found (if they were sufficiently motivated and other community support mechanisms were present), it isn't enough to offer a random or impoverished collection of blocks. The need for a coherent set of building blocks was apparent when the SeniorNet Web site opened without a chat capability, though it did have many discussion roundtables. Until it was added, members reported that they went elsewhere on the Web to chat. Perhaps they needed and wanted chat because they knew it was out there somewhere, or perhaps they needed something lightweight and immediate to complement the more persistent conversations available in roundtables.

One technology affordance still lacking from SN is mechanisms for background awareness. Lurking is an acceptable practice on roundtables and is often cited as a way to get a feel for the community as well as a strategy for managing time online (read more than write). But members comment of sometimes feeling disconnected in areas where they lurk as well as awkward when trying to break into a conversation. Background awareness of lurkers might help people make the jump from lurker to participant.

Design Implications

To design technology for a network community with rhythm in mind means offering diverse communication possibilities that can be used alongside one another or together. These modalities must also be presented in a way to allow appropriation and shaping by community members. This range is needed for a number of reasons: First, the range supports the inherent diversity in the community. Providing a spectrum of topics, interaction styles and rhythms allows a larger population of people to find the right match for their interests, personality, level of technical expertise and availability of time. Diversity makes the community interesting and a place of continual learning. Without supporting this diversity, the community will

be too narrowly focused and will likely not thrive for any substantial period of time. Second, this range allows individual members to share parts of their whole identity in different forums. This flexibility encourages members to "try out" ways of participating, as well as providing a tractable way for members to share their various interests, concerns and personalities. Third, members can move through different stages of participation without dropping out of the community. We saw numerous examples of members keeping their connection with SeniorNet while partaking in different activities during their tenure.

Movement from one modality or style to another must be straightforward and fluid to allow people to shift their attention and participation easily. Common interfaces and quick short-cuts between related forums allow members to easily shift between their areas of interest. While the various modalities support different modes of participation, they must still be part of one "place." Although SN members participate in numerous forums, they still referred to "going to SeniorNet."

While the SN community makes great use out of one technical building block, forums, there are other technical requirements. As was discussed, the members needed a realtime chat capability to support primarily light-hearted conversation amongst temporally-based groups. The SN study points to a positive model for the role of lurkers where lurking is an encouraged and acceptable practice. Nevertheless interfaces that support the shift from lurker to writer are needed For example, visibility of lurkers in real-time chat could help people initiate conversations In forums, "footprints" of readers could increase community awareness of silent members and the patterns of communication amongst the whole community. Finally, the technology must be reliable enough to support the development of predictable rhythms.

Groupness and Community Development

Communities of any kind are characterized by affinity and shared practices that create meaningful context and define the boundaries of the group (Kiesler 1997, Rheingold 1993). Our early work suggested that their cohesion was the result of a shared history, multilayered relations and contexts and a sense of "locality." In the case of SeniorNet, the sense of locality and cohesion of the community is maintained through the enabling networking technologies, as well as a rich history, dedicated members, age cohort affiliation, and a shared set of social conventions.

History and Change

SeniorNet provides a particularly rich case study of a network community not only because of it's robust and diverse social life, but also because of its history, which spans over ten years and three different online sites.

The SeniorNet community is the result of a long series of developments and the hard work of dedicated members and staff through the years. Like other "intentional" communities, SeniorNet had a founding ethos and an ongoing 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." SN grew from a concept funded by an initial research grant in 1986, to a small social group on Delphi, to larger and more diverse communities on AOL and the web, Throughout its history, core members and volunteers have maintained social and cultural continuity of the group, as well as created openings for new members to find a voice and develop new directions.

In the shift from Delphi to AOL in 1991, most of the 3-400 members were transplanted, so the community was essentially reproduced wholesale in a new technical infrastructure. These established members took ownership of this new space and formed a durable core identity as the community grew through its affiliation with AOL to the current numbers of over 5000 participants. When the web site debuted in 1997, some members from the AOL group were asked to "seed" the new site and were instrumental in transplanting the ethos of SeniorNet in the founding of an almost entirely new group.

While SeniorNet has been remarkably successful in maintaining continuity in the various dimensions of community through its many permutations, the character of the community has also gone through many inevitable changes, as the group has grown, computer networking has become more mainstream, and through oldtimers changed their relationship with the community. In the early years of SeniorNet, the relative rarity of computer networking in general, and among seniors in particular, contributed to a sense of wonderment and a pioneering spirit among early members. As one early member recalls, ."...for us, at the beginning, it was so strange and so wonderful! Here we are!"

As the community has expanded, some oldtimers have continued to be active, helping to seed the new permutations of the community, and taking a leadership role. Other oldtimers have moved to a more peripheral role in the community, preferring to maintain the numerous close ties that were developed in their early involvement, rather than continue to widen their participation in the community.

Ways to Participate

The history of the SeniorNet community is one of a small cohort of computer-using pioneers transforming itself into a group of thousands, differentiated into many different sub-communities. In the initial days, it was possible for an active member to keep track of most of the postings on a site, and thus "know" all other active participants. Currently, only the most dedicated of members can even hope to keep up with the volume of postings community-wide, and almost all members choose certain aspects of either the web or AOL to frequent regularly.

As SeniorNet has grown and become more differentiated, different modes of participation have emerged. These distinctions are familiar to network communities in general: hosts and sysops, moderators, regulars, newbies, and lurkers These categories allow for a diversity of ways of participating and also support learning by providing openings for newcomers to lurk, enter, and engage with the group. Each sub-community we observed, including chat and different roundtables on the Web and AOL, has a core set of regulars. However, we also noticed in each group that newcomers are welcomed with warmth, and on the web, hosts will welcome any new poster that they see with a personal email that gives information on how to navigate the site. In chat, a new "face" is welcomed with warm hellos and introductions all around. While lurking is awkward in chat, there does seem to be tolerance for lurking in the roundtables. We saw that when former lurkers post for the first time, they are usually greeted with encouragement rather than ignored or chastised for their earlier silence.

A posting in the AOL Newcomers Forum sums up the SeniorNet ethos for extending a welcome to newcomers:

> "SeniorNet is made up of people of your age group and there are many nice people here Be nice to them and they'll be nice to you There's always someone here that is willing to help with puter and other problems If you're new to puters I would suggest you just lurk (hang around observing) in different places till you get a feel for the tone of the area you're in Then when you find an area you like and feel secure in-----participate. Be sure to read the items on the first page upon entering SeniorNet---it explains our whole thing (newcomer)"

Identity

In addition to a unique history, mission, and organizational structure that has defined the norms and boundaries of the SeniorNet communities, SeniorNetters also share an affiliation based on their inclusion in an "over 50" age cohort. Formal membership in the SeniorNet organization is based on this age criteria. And while there are no formal age defined boundaries to participation in the online sites (nobody is officially barred from participation, including under 50 researchers), there is a shared understanding that the community is meant for people age 50 and

above. This age-based social boundary is clearly operative in the community· there are discussion topics related to aging and historically specific experiences such as reflections on WWII. Further, social practices in the community are related to the social norms of this generation. In particular, the community is characterized by what we came to call *civility*, a sense of courtesy and social protocol that differentiated SeniorNet from the interactional practices of most other Internet communities.

The age-defined group boundary seems, at first blush, to be the most defining feature of the community, and the one most easily at hand when considering how membership is constructed. This age-based identity, however, like any other social category that is not necessarily of an individual's choosing, is cause for contestation, resistance, and appropriation. The boundary of "over 50" obscures an incredible diversity of experience and social locations, not to mention over 40 years in age range, a much larger range than any other age cohort (children, teens, twenty somethings, thirty somethings, boomers, etc).

Participants in SeniorNet include people who are working full time, part time, or completely retired, who may be travelling to obscure parts of the world or largely homebound, who may be taking care of children, grandchildren, or their own aging parents Feminists have mulled over the complexities of what it might mean to demand solidarity based on the shared category of "women," as it obscures the diversities of women's experiences across different cultures, races, and classes (hooks 1997, Butler 1990). Similarly, the category of "senior" can be considered a particular kind of social production that at once is a source of solidarity and shared identity, and something to be resisted as a "box" that incompletely defines the self.

In the two roundtables that we started on the AOL and the Web to discuss our research, we had a number of lively conversations on the category of "senior," that informed our understanding of the complex identities participants bring to this community. On one hand, we received a handful of challenges to our research because there are no seniors on our research team. Could we really understand what it meant to be a senior on SeniorNet? Clearly, in this context, the category did matter in some important ways. When we opened up the topic of senior identity as an explicit discussion item on the roundtables, lively exchanges ensued. Many participants pointed out the many positive dimensions associated with their age— wisdom, knowledge and comfort with self, having a good time. But most of the responses in some way worked to contest and complicate any simple notion that we might have had of the category of "senior." The following excerpt summarizes the

sense that "seniorness" is an occasion for affinity, but is, at the same time, not exhaustive of a person's identity:

> *"Like attracts like. seniors attract seniors.' That is not to say 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 of today do not understand us They categorize us in one lump image Not so, and we as seniors know it Each day is the day I again start to live "*

SeniorNet is thus a new kind of organization and community that works both to sharpen this age-based identity and muddy its definition. Computer networking has enabled a new form of "locality" to be produced that is roughly defined by age cohort rather than spatial boundary. But just as co-location says little in itself about what a certain group of people might share, "seniors" as a category is an organizationally useful distinction, but one that is not personally or socially encompassing. SeniorNet has provided one of the most successful online spaces for those of an age cohort to explore both their similarities and differences and most importantly, to define a community that is not reducible to their age-based affiliation.

Civility

Once within the boundary of this new territory, what is interesting is less how people do or don't affiliate, construct or deconstruct the category of "senior," but rather what it is that they do find meaningful and rewarding within this shared social space. SeniorNet casts a wide net with its age-based boundary, and a diversity of topics, styles, and personalities co-exist in this community of communities. Despite this diversity, there is a diffuse but pervasive ethos of SeniorNet, which we have come to characterize as "civility," a sense not only of courtesy and manners, but also an ethic of care, friendliness, and support.

In interviews, SeniorNetters repeatedly commented on the warmth and friendliness of the community as something that differentiated SeniorNet from other net communities, and as a reason for their participation and comfort with the community.

This quality of the community has already been alluded to in the discussion of how newcomers are welcomed. In the roundtables in general, off topic comments are treated warmly. In the technical help areas, even very beginner or vague questions are treated with courtesy and warrant thoughtful responses. Throughout the roundtables, but in illness, bereavement, and support areas in particular, the amount of supportive sentiment is overwhelming, expressed through ongoing "hugs," warm wishes, and demonstrations of concern.

Like any community, SeniorNet is not without its occasional conflicts, personality clashes, and flame wars. These conflicts can, however, actually be evidence of the pervasiveness of the ethos of civility, by demonstrating the response to a breech in social etiquette. Posts that are perceived as impolite or argumentative are not considered appropriate. A guest user looking for typical net debates received these responses:

> *This is an interesting group linked into it via www.hotsheet.com for the first time to see if there were others who, when they were little and saw an airplane, waved at it and screamed, "hi, lindy!" been browsing for the past hour and began to wonder why there's no diversity of opinion is it because no one seems willing to stir up a little controversy (or maybe a big one)? (Guest User)*

> *Fred - Welcome to the RoundTables If you think there is no diversity of opinion expressed in the RoundTables, you just haven't been to the right folders We do argue about religion and we do argue about politics - albeit in a friendly adult manner, seldom with any recriminations .. (Beth)*

> *FRED I'm laughing at you because you've missed some of the best fights albeit polite ones They are to be found in the nostics folder in the liberal folder..my own area for swinging at windmills and the feminist and mens lounge .the lifestyles folder is a good place to get bashed for one reason or another if you are a male nicely of course. I'm a political liberal and an athiest want to have a swing at me. Glad to meet up with another lively gadfly (Violet)*

Design Implications

SeniorNet demonstrates how a demographic group can be used to define a boundary for a network community. At the same time, the case demonstrates how a demographic category does not encompass the identity of a community SeniorNet has grown into a community by accommodating not only a diversity of participants but a diversity of content and modalities, enabling people to pursue avenues both related and unrelated to a "senior" identity. Thus these notions of range of modalities and diversity of content discussed in the previous section still emerge as requirements even when a collection of people with common characteristics are drawn to a networked place.

The SN study provides a clear example of "seeding" a net community with a particular set of characteristics and practices. When it is necessary to migrate or expand a community, calling upon senior members to lead by example helps ensure continuity of the community.

While research has shown that the medium of internet communication encourages certain personality traits and practices (Kiesler 1997), such as flaming, the SN community provides a clear counter-example to the assumption that networked interaction must conform to the norm.

Real/Virtual

Network communities are conglomerates of people, practices, and places that are computationally, physically and otherwise embodied. A myriad of technical and social structures and conventions are required to manage the linkages and disjunctures between computational and "real" elements. For example, representations of people and objects in online environments often draw upon pre-existing social conventions. Additionally, events in the physical space, ranging from dinner to a family crisis, may have repercussions in the online space Actions or practices in the real world, such as introducing yourself or participating in a cocktail party, may have new mechanisms (both technical and social) when adopted to an online space.

In short, there can be numerous links between the real and virtual realms. One hypothesis is that some successful online communities *require* strong and numerous links between the social spaces of the virtual space and the physical space. Amid ongoing debate regarding the value of online participation with respect to the quality of life in one's physically local social set (Kraut et al 1998), our observations of SN demonstrate the feasibly of integrating real life with virtual interactions such that real life referents form the dominant context of their community.

Grounded in Reality

Interactions in SN are integrated with the real-world lives of its members in multiple ways. These connections range from annual face-to-face gatherings to coordinating daily interactions.

We were impressed with the importance of face-to-face interactions amongst a number of the SN members Some examples are:

- Annual national and regional conferences sponsored by SeniorNet,
- Arranging opportunities to travel together such as booking a block of rooms on a cruise to Alaska,
- Visits to SN members who live in different cities, and
- Informal lunches with members who live in the same area.

One characteristic of the SN population is that many of them have both the time and the ability to get out of the house, if not to travel extensively, at least to attend regional gatherings. In addition to scheduled gatherings and informal social events, a face-to-face encounter can make the support and concern of the online community tangible:

> "The event (or series thereof) that created an almost unbreakable bond between me and the
> Seniornet Community was a period which brought with it the end of my mother's life after a

long illness. It may be important as Seniornet history since I'm sure that many of us at that time (and now) were living in that critical space where we were dealing with children, grands, and aging parent or parents. Most of us had seen the death of loved ones, but were just learning to share that pain with others . And, on the day of her funeral, one couple from Seniornet was standing beside me as an unofficial representative of the group, and we'd made the transition from virtual to real "

Still, many SN members do not frequent face-to-face gatherings as they may be homebound due to infirmity, illness, or caring for a parent or spouse, or they may live in a remote location. Some SN members who are home-bound still find ways to connect, for example with daily phone calls. Others report that SN provides a social outlet even if they do not see each other face-to-face.

Face-to-face encounters are just one way that virtual interactions on SN are connected to the physically-grounded real lives of its members. Other examples are:

- Many people include their real names with their posts, although they may also use a fun nickname/handle as well.

- Couples may use a joint account together. In these cases, SN seems to be part of their lives as a couple. We learned about Alice due to her virtual birthday party on AOL. Although Alice is a long-time participant, she never posts. Her husband, Ken, who is her caretaker, posts updates about their lives and her condition, and he prints out the messages for her to read.

- Interactions in SN are organized around real-life rhythms. For example, the regular evening chatters know that they should wait until after dinner time for most of the crowd to show up

Reality, Not Just a Feature

The connection between virtual interactions and the real, physical world is more than just a curious characteristic of the SN community. It is key to what makes SN tick, what makes it worthwhile for many of its members.

One of the reasons SN members prefer SN to the other offerings of the Internet and AOL is that they report that they feel more "safe," safe from predatory, deceptive or offensive behavior. In contrast to other virtual sites that try to create a sense of safety via anonymity, SN members share enough personal information so that they no longer feel like strangers to each other on the Internet but they "feel like people like me." One possibility is that the existing social norm of introducing oneself, saying where you're from and a little bit about you is extremely important to follow even, or especially, in virtual interactions. We do not mean to imply that this practice of sharing real-world information is done in a naive or risky manner.

For example, members are instructed to not post their phone numbers and an authorized user (e.g. a host) will remove a phone number from a posting.

In addition to real life practices influencing life in SN, SN also becomes an integral part of real life events. Again, members stress that it is this connection that makes SN special. When Gerine's husband had a heart attack while traveling in Atlanta, she was online with SN when her son called her with the news. She tells one of her online "sisters" Helena the news and rushes to catch a plane to Atlanta:

> "and I'm standing right in the middle of the Intensive Care Unit floor, and the phone rang. It's Helena is everything all right? What can we do? The phone rings again it's John from Maryland. And then, a third time, Bill do you need anything? Do you need money? Do you want me to come down and be with you? Neither of my kids called, but those SeniorNet friends called That's caring When he got home, there were 75 emails waiting for him "

SeniorNet's mission statement includes "to enhance their lives and enable them to share their knowledge and wisdom." The sharing of life experiences is an important component in the relationships of SN members. When one person writes of a painful, possibly ongoing, issue in their life, not only do other people express their sympathy and support, but some can also write that happened to me too. It is difficult to imagine that this sharing of experience and lessons learned would work without the overall real-world grounding of the community.

Virtual Fun Too

SN is not simply an online place that simply replicates real-world interactions. SNetters still enjoy the freedom of virtual play in the SN Cafe, at online parties, and other online events. This mixture of real-life concerns with the charms of virtual play is wonderful to experience.

Design Implications

Understanding the role of design in integrating real-world components into a virtual space is a challenge. More and more evidence seems to point to the benefits of connecting the real and virtual realms. What these connections are varies from community to community. Safety concerns for children are different than those for adults. Workplace groups using media spaces with audio and video connections have different needs than recreational groups that use primarily textual communications. The key message here is that designers should not discount the value of real-world connections and should provide multiple paths for information to flow between the two realms. Additionally, practices from representing oneself to assigning rights and responsibilities can fruitfully spring from existing real-world norms

Concluding Thoughts

SeniorNet is an active community that combines work, learning and play. Our hope is that the details of this study will fuel the intuitions of designers and members of network communities. General observations from this study include:

- Primitive building blocks can be the foundation for community interaction if members can appropriate these tools, technical infrastructure supports predictable rhythms, and these blocks are designed together to create a sense of common place.

- Common Internet customs do not have to be the norm. In SeniorNet lurking is an accepted and encouraged practice. Civility reigns in contrast to flaming and other antagonistic behaviors. Members refer to their community as a place that is "right for them" in contrast to the rest of the Internet as a foreign and unfriendly experience.

- Longevity of a community requires providing a range of ways for members to participate in order to support diversity within the community as well as encourage participation over time. Migration and other major shifts in the community require leadership by example from senior members to maintain the community's practices and characteristics.

- Connections with the "real world" can be the backbone of a community while still partaking in the advantages of virtual interaction.

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