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Teens on the Internet
Interpersonal Connection, Identity, and Information

When the *New York Times Magazine* looked to teenagers to herald the dawn of the 21st century, it found them online. In an article in the magazine's millennium issue, journalist Camille Sweeney (1999) marveled at the nature, speed, and sheer abundance of communication among teenagers whom she had observed in chat rooms and message boards throughout AOL and the Web. In the ensuing years, teenagers' use of the Internet (and in particular instant messaging [IMing]) has grown to the point at which today's youth are referred to as the Internet (Tapscott, 1998) and IM generation (Pew, 2001).

Though about 75% of young people in the United States are estimated to have Internet access, there is very little research on aspects of their Internet use, such as "its nature and quality, its social conditions, cultural practices, and personal meanings" (Livingstone, 2003, p. 159). The unique social and communicative environment of the Internet gives rise to intriguing research questions about its use among youth: How do teenagers typically spend their time online? How important is communication in this total picture, and by what means do adolescents communicate on the Internet? What is the nature of the online culture that teenagers are constructing together? These broad issues also give rise to more specific questions: Do teenagers use the

disembodied and faceless nature that often characterizes Internet communication to experiment with identities, or do they compensate for this disembodiment by developing new ways to express identity in the online medium? Do teenagers take advantage of the outreach capabilities of the Internet to seek social support and romance and discuss critical but difficult issues like race, sex, and illness with strangers, or do they intensify existing relations by communicating mostly with friends and family? In this chapter, we begin to answer these questions through ongoing research at the Children's Digital Media Center (CDMC) at UCLA.

We begin by reviewing research by Gross (2004) that, together with recent findings from national surveys on Internet use (e.g., Pew Internet and American Life Project, 2001), provides a context for closer examination of the nature of adolescent online communication. Then we review research on the nature, extent, and function of teens' online pretending. In the next section, we examine and describe the online culture constructed by participants in teen chat rooms. Here we review two studies that examine how participants in online teen chat rooms address critical developmental issues, such as identity, sexuality, partner selection, peer relations, and race (Subrahmanyam, Greenfield, &

Tynes, 2004; Tynes, 2003). Finally, we review findings from Suzuki and Calzo (2004), whose analysis of the questions posted on two teen health bulletin boards demonstrates how youth are using the Internet to ask and respond to their peers about highly personal questions involving their health and sexuality.

Varieties and Functions of Teen Internet Use

According to a survey conducted by the Pew Internet Project in the fall of 2000, at least 17 million or 73% of American youth between the ages of 12 and 17 years use the Internet (Pew, 2001). However, as several authors have recently argued (Gross, Juvonen, & Gable, 2002; Livingstone, 2003), documenting the pervasiveness of adolescents' Internet use tells us little about the functions, effect, or even critical characteristics of such use. More detailed data are needed to understand the social and developmental functions that online activity may serve (Kraut, 2003).

In 1999, Gross and colleagues set out to specify how and with whom adolescents spend their time online. Given their interest in the psychosocial context of Internet use and their expectation that much of teens' online communication occurs in private settings, Gross et al. (2002) employed a daily diary methodology that enabled them to both reduce bias and recall of time use and collect highly detailed data from youth regarding their online activity that day. To examine an adolescent peer context in which Internet use is widespread, they sampled from a relatively homogeneous mid- to high-socioeconomic status community in Southern California.

Participants included both seventh (mean age = 12.1 years, $SD = 0.4$) and tenth (mean age = 15.3 years, $SD = 0.6$) graders. Of the 100 boys and 161 girls who participated, 60% were European American, 19% were Asian American, 7% were of mixed heritage, 5% were Latino, and 1% were African American. A two-part data collection procedure was used: after completing an in-school survey, participants completed three to four consecutive end-of-day reports of their activities and feelings that day. Daily activity measures were obtained by asking participants such questions as "How much time did you spend after school today using chat?" Data were aggregated across study days, so that results represent adolescent participants' average weekday online activity (for a review of daily report methodologies, see Reis & Gable, 2000).

On the most basic level, it is important to know where Internet use fits into the context of young people's days. Although 91% of participants reported occasional or regular home Internet use, on a single day within the study, 40%–65% reported going online. In addition, as shown in figure 13.1, participants' after-school time was by no means dominated by Internet use. Rather, on average, time online most approximated time spent in two quintessential adolescent offline social activities: talking on the phone and hanging out with friends. Importantly, no age or gender differences were found in daily time online (see fig. 13.1). However, a gender difference in online experience was found among ninth, but not seventh, graders; among tenth graders, 88% of the boys had been online for more than 2 years, compared to only 72% of the girls, whereas among seventh graders, the same percentage (59%) of boys and girls had been online for more than 2 years.

One distinction that Gross and colleagues drew was between social and nonsocial Internet activity. In 1999, when this line of research was begun, online communication tools such as IM were commonplace on the computer screens of teenagers but remained notably absent from the pages of academic psychology journals (for an example of this distinction in the field of Information Systems, see Kraut, Mukhopadhyay, Szczypula, Kiesler, & Scherlis, 1999). In general, available data offered few distinctions among nonsocial and social forms of Internet use and typically failed to take such distinctions into account in analyses of psychological or developmental correlates of use. Gross et al found that, on average, two of the three main uses of the Internet by teenagers involved private communication. As shown in figure 13.2, on average, participants devoted the bulk of their daily time online to three domains: IM ($M = 38.97$ minutes, $SD = 42.8$), visiting web sites ($M = 33.10$ minutes, $SD = 39.4$), and e-mail ($M = 21.70$ minutes, $SD = 16.5$). Within the broad category of web surfing, the majority of time was devoted to downloading music ($M = 30.95$ minutes, $SD = 43.5$). It should be noted that the sum of the mean time spent in specific domains far surpassed the average daily overall time participants reported spending on the Internet. This disparity indicates simultaneous activity, or multi-
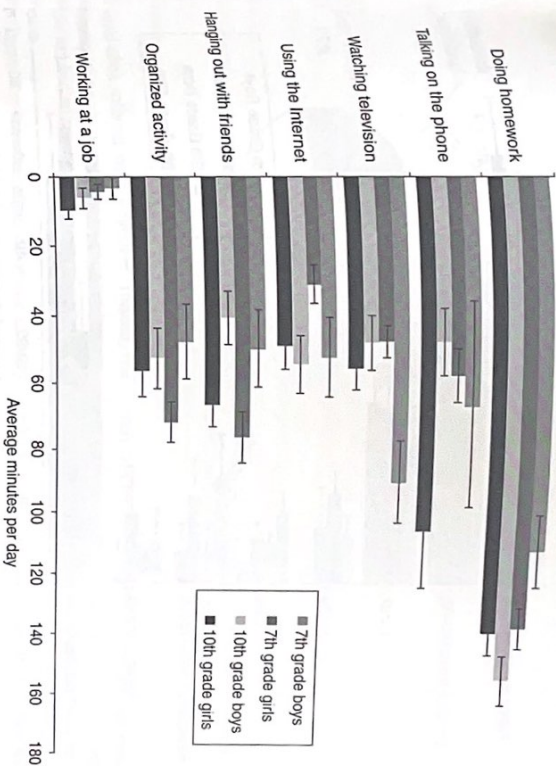
tasking, that is, of the 46 minutes the average participant may spend online daily, 36 minutes may be spent IMing, and 30 minutes may be spent visiting web sites and downloading music (although it should be noted that this inequality may also reflect other causes, including estimation biases).

Furthermore, there were few significant group differences in online activity. The only group differences were that tenth-grade girls reported spending more time using IM than did all other groups, and tenth-grade girls also reported spending more time chatting than seventh-grade girls ($p < .05$).

Although private communication channels (e-mail and IM) were more frequent than public communication (e.g., chat, message boards), 18% of the respondents reported visiting at least one chat room over the course of the 3–4 days of the study. Indeed, most teenagers in the United States have explored chat rooms at one time or another. In a survey conducted in 2000, the Pew Internet and American Life Project (2001) reported that 55% of online teens had visited a chat room. In a second survey conducted in fall 2001, the Kaiser Family Foundation found that 71% of 15- to 17-year-old Internet users participate in chat rooms.

Figure 13.1. Average daily time (+SE) online and in other after-school activities ($n = 261$).

Working at a job

Organized activity

Hanging out with friends

Using the Internet

Watching television

Talking on the phone

Doing homework

Legend:
- 7th grade boys
- 7th grade girls
- 10th grade boys
- 10th grade girls

Average minutes per day (0, 20, 40, 60, 80, 100, 120, 140, 160, 180)

Another important psychosocial distinction in Internet use is communication with close friends versus strangers. From a social and developmental perspective, there is a world of difference between the teenager who hurries home from school to exchange e-mail with the classmates she just bid goodbye for the day (Subrahmanyam, Kraut, Greenfield, & Gross , 2000), and the Internet user who prefers playing a furry animal in a Multiuser Dungeon to living his offline life, to which he refers as "just another window" on his computer screen (Turkle, 1995). Since Turkle's landmark case studies were published in 1996, new online communication technologies that facilitate communication with known others (e.g., buddy lists), coupled with the rapid growth of in-home Internet use, mean that the Internet can now be, more than ever, a medium for both anonymous interaction with strangers and communication with established, offline friends (Kraut, Kiesler, Boneva, Cummings, Helgeson et al., 2002).

As expected, communication with people met online varied across communication modalities (see fig. 13.3). Whereas gaming was dominated by interaction with people met online, IM, the online activity to which participants devoted the most
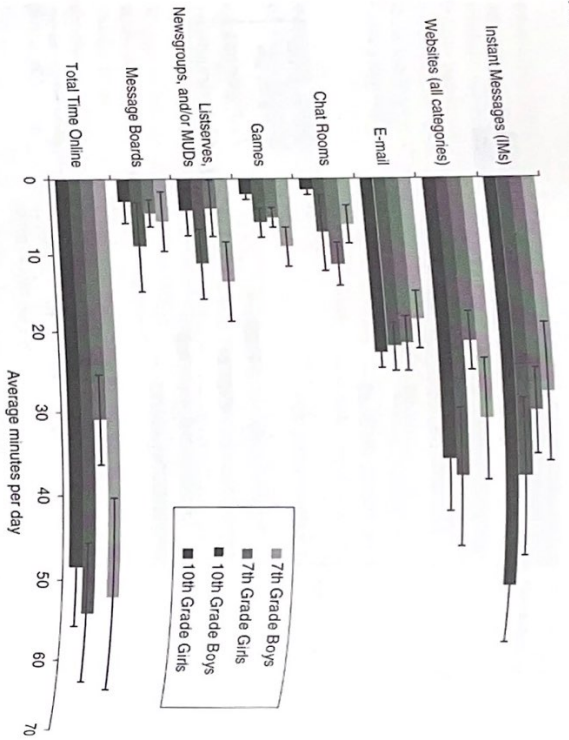
Figure 13.2. Average daily time (+SE) spent online by Internet application.

Labels on chart: Instant Messages (IMs), Websites (all categories), E-mail, Chat Rooms, Games, Listserves, Newsgroups, and/or MUDs, Message Boards, Total Time Online

Average minutes per day

Legend: 7th Grade Boys, 7th Grade Girls, 10th Grade Boys, 10th Grade Girls

% of All Communication Within Each Application

GAMES CHAT EMAIL IM

Figure 13.3. Communication with people met online by Internet application.

time, was dominated by communication with off-line peers. Indeed, fully 82% of IM partners were friends or best friends from school (see fig. 13.4). About half (48%) of the chat experiences involved communication with people whom participants had first encountered online; interestingly, no
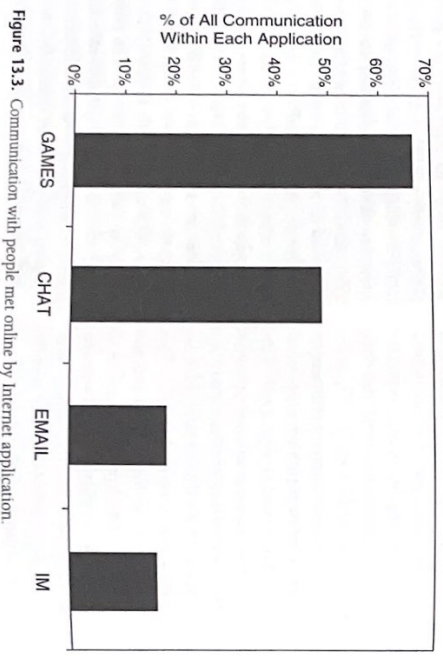
age or gender differences were observed in this tendency.

In summary, the youth in this study spent a majority of their online time interacting with offline friends, although a substantial minority ventured into the public space of a chat room, where they
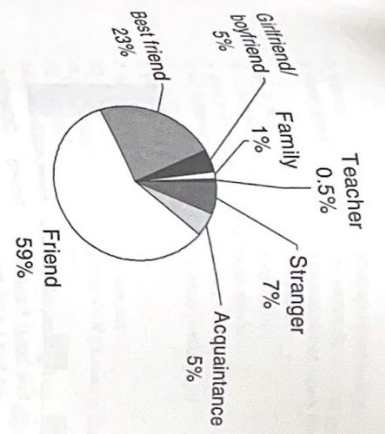
would often interact with strangers. Indeed, the majority of youth, according to national surveys, have had had some experience with such public spaces.

Despite the sensationalism of online identity play, these figures would lead us to expect that pretending to be someone else would occur less frequently than claiming one's real identity. To find out whether this was the case, Gross and colleagues asked adolescent participants when, how, and why they pretended to be someone else online. Sixty percent of participants reported that they had never pretended to be someone else; 40% had. The surprise was that identity play was not limited to interactions with strangers. Rather, those who had pretended to be someone else often did so in the physical company of school-based friends. Tenth graders were more likely than seventh graders to pretend in the presence of a friend. When asked about the reasons why they engaged in pretense, 33% of youth reported that it was a joke, and 26% explicitly mentioned friends as accomplices or targets. Another 24% of those who pretended explained that they hid their identity to protect themselves and their privacy or to get past online rules. A minority of explanations (3%) appeared to involve identity exploration per se. For example, only one participant reported pretending to "to try out a personality." Not surprisingly, 82 of 95 respondents had pretended to be older; as is evident in figure 13.5, other online personas were less common. The frequency of trying to be older raises the possibility that, in a teen chat room, some participants may be younger than they say—something to bear in mind as we explore the culture of teen chat in the

next two sections. In contrast, the fact that most respondents had never pretended to be something other than what they were indicates that many participants in anonymous public communication modalities, such as chat rooms, are who they say they are.

But what do they say they are? Indeed, is identity even a subject in an anonymous space like a chat room? Identity has long been considered an important adolescent concern (e.g., Erikson, 1968). We turn to this and other important adolescent issues—sexuality, identity, partner selection, and peer relations (Subrahmanyam, Greenfield, & Tynes, 2004)—as we explore the culture of a teen chat room in the next section.

The Culture of a Teen Chat Room: Linguistic Codes and Adolescent Issues

To understand how online communication may serve as a context for adolescent development, one must start by studying the culture of teenagers' digital environments (Greenfield & Subrahmanyam, 2003; Subrahmanyam, Greenfield, & Tynes, 2004). Greenfield and Subrahmanyam broadly define culture as that which is socially constructed and shared. They focus not on the material aspects of online culture but on its symbolic aspects, such as its linguistic codes, interactions, and discourse patterns. In doing so, they documented examples of how critical adolescent developmental issues such as identity, gender, sexuality, and peer relations are socially constructed within chat rooms. Because of the anonymous nature of chat rooms, no verifiable information is known about individual

Teacher 0.5%
Family 1%
Stranger 7%
Acquaintance 5%
Friend 59%
Best friend 23%
Girlfriend/ boyfriend 5%

Figure 13.4. The identity of instant message partners.

Frequency

(bar chart with frequency axis 0–90; categories: Older, Other Gender/ Sexual Identity, Younger, Friend, Celebrity, Sibling, Other/Not Specified)
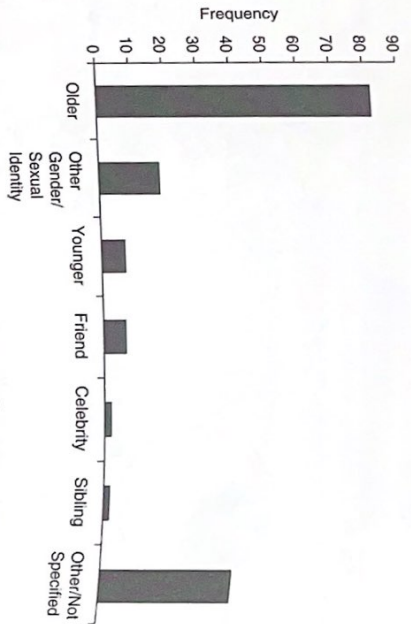
Figure 13.5. The content of online pretense: Frequency of teenagers reporting different identities (n= 95).

participants, and so their investigations operate at the cultural rather than the individual level of analysis. This culture is particularly interesting because it is constructed at the group rather than the dyadic level of e-mail or IM. Chat room interactions are also interesting from a developmental point of view because they offer an anonymous public window onto online adolescent culture that is not available in the private modalities of e-mail or IM. On the basis of a qualitative analysis of chat room discourse, these interactions indicate that participants in teen chat rooms are constructing and using news codes and modes of communication (Greenfield & Subrahmanyam, 2003) in the service of major adolescent developmental issues (Subrahmanyam, Greenfield, & Tynes, 2004).

In the tradition of conversation analysis (Schegloff, 1979), Greenfield and Subrahmanyam analyzed a lengthy, spontaneously produced verbal exchange in a chat room. The methodology involved Greenfield acting as a participant observer in an online teen chat room. Like the other participants, she gained access to this chat room through an account with an Internet provider. She mainly took the role of observer in the chat room, and at the end of the session, she printed out the log of the conversation. The electronic chat log was copied into a Microsoft Word document, an excerpt of which is shown in figure 13.6. Although the content of the transcript in figure 13.6 is identical to what another user in the chat room might have seen,

we have changed the formatting of the fonts to show the conversation threads. We have also changed the screen names of the chat participants.

Before returning to the theme of identity, it is necessary to say something about the communication environment of chat. The multiparty nature of the conversation makes it nonobvious to a novice how to comprehend what is going on. The first step in Greenfield and Subrahmanyam's (2003) analysis was to diagram the various conversations that were occurring. Note that the major communication issue in chat is not speed but the fact that multiple conversations are going on at once and participants are often taking part in more than one conversation. With the assistance of a 21-year-old informant who had considerable experience chatting, the researchers identified three main threads of conversation in the four-page transcript (see fig 13.6). In contrast to face-to-face-conversations, one thing that stands out is the number of intervening turns between the relevant contributions of a conversation thread. As a consequence, related utterances are not always adjacent to each other.

Identity in a Chat Room

The expression of personal identity in a chat room is complicated because participants are disembodied online and that basic identity information about users is not readily available. Age and sex are the primary categories according to which people are assigned (Brewer & Lui, 1989). These

```
1  mirrose76:          shut up i dont need it
2  morn8sun:           no seriously . . . the great one. . . . this ass rang my bell
                       talking about open the door
3  al commands:        yes you do
4  suddenreaction:     i do 14/m
5                      you have just entered room «silver»
6  al commands:        dont try to deny
7  al commands:        (shes in denial guys)
                       /89
8  blakpower1413:      oh
9  agreatonefeb74:     no am not
10 mirrose76:          press 14 if ya wanna chat 2 a 14/f/cali
11 mizprude1762:       u /\
12 mirrose76:          im like wrong bell. . . . if he came again i would of cussed
13 morn8sun:           him out good and plenty
                       one time I had too
14 morn8sun:           what happened mom?
15 al commands:        14
16 blakpower1413:      kew1
17 agreatonefeb74:     hahahh
18 al commands:        fuckdany?
19 al commands:        i am what?
20 swimteambabe:       lol
21 suddenreaction:     what?
22 al commands:        who is f*** dany
23 al commands:        the greatest?
24 morn8sun:           ya, i know
25 morn8sun:           a/s/l
26 morn8sun:           al did i give u permission to talk to ne one?
27 mirrose76:          who believe's speedo's (on guys) aren't right
28 pinkbabyangel542:   type 3
29 pinkbabyangel542:   what!!!
30 al commands:        3
31 pinkbabyangel542:   3
32 dustinknosall:      3
33 swimteambabe:       any fine ladies want to chat press 69 or im me
34 brenjyd:            are you trying to talkback to your master
35 al commands:        ??
36 al commands:        hey
37 sportyman04:        this ass came to myrang my bell talking about let me in
38 morn8sun:           it's friggin scary
39 pinkbabyangel542:   it's friggin scary
```

Figure 13.6. Record of conversation in a monitored teen chat room; see Greenfield & Subrahmanyam (2003) for the complete computer printout without altered fonts or capitalization. Note that, in the original record, participants distinguished themselves by utilizing different fonts or cases for their contributions. Italics = conversation 1; bold = conversation 2; underlined = conversation 3.

characteristics are clearly evident in face-to-face conversation but are missing online. Location, a third piece of identity-related information, is also fundamental and is taken for granted in face-to-face interactions. Location can most definitely not be taken for granted on the Internet, and users have

adapted to this challenge by devising a cultural solution—the a/s/l code, which is in the form of a slot-filler code in a standard graphic format (Greenfield & Subrahmanyam, 2003). In this code, "a" stands for "age," "s" stands for "sex," and "l" stands for location. According to the Pew report (2001),

online teens report, that the a/s/l code is the most common question directed toward new entrants in a chat room (p. 23). The a/s/l code is used as a conversation opener to find out the characteristics of others in the room, as in the example below:

20 Swintcambabe: a/s/l

The a/s/l code is also used to announce one's own characteristics, as in the next example, especially when looking for a conversational partner of a particular sex:

67 MAKERSCLUB701: Any girls in here wanna
     chat im me
71 MAKERSCLUB701: 17m/fl

This code capitalizes on the anonymity and alphanumeric nature of the chat environment, and has been developed by chat participants to give and receive fundamental information about potential conversational and/or romantic partners. Age, sex, and location have thus become important elements in the identities constructed in a teen chat room.

The Sexual Body in Cyberspace

The third thread in conversation 3 provides a good example of the social construction of sexuality in a teen chat room. The implicit topic of the conversation seems to be that Speedo bathing suits show off sexual anatomy, especially of boys. The conversation is begun by PinkBabyAngel (line 28), who wants to explore this topic, and gets agreement and encouragement from her peers in lines 32 and 33. Here, she uses a numeric code that allows her to discern who agrees with her out of the flow of multiple conversations. Requests to type a particular numeral are used frequently to identify a conversation partner who may be willing to relate in a positive manner, here by agreeing about Speedos. Typing the requested numeral indicates a desire to form a validating subgroup of peers out of the anonymous group of chatters. In this instance, PinkBabyAngel finds two kindred souls, Dustinknosall and Swintcambabe. Further on in line 39 ("it's friggn scary"), PinkBabyAngel indicates that she is not yet ready to face the male sexual anatomy. In turn, Proffich gives the male perspective in line 45. At this point, the conversation becomes a kind of an exploration of sexualized relations with the opposite sex (lines 65, 68, etc.).

Conversation 3 illustrates a central adolescent developmental issue—concern about the sexually developing body. In this example, the special contribution of the online medium to this developmental issue is that it enables participants to have a frank discussion of a potentially embarrassing topic.

Romantic Partner Selection

It is interesting that in the midst of this discussion, Brenlyd attempts a fairly overt sexual pickup in line 34 (immediately after two female chatters have agreed that Speedos are not right on guys). No one replies in the public space, but we have no way of knowing whether anyone responded with a private message. Cyber pickup attempts in online chat are common, and because not all responses occur in the public space, it is difficult to assess how successful these attempts are. It appears that success is enhanced when participants are forthcoming with basic identity information about their age, sex, and location. An example of a successful pickup is:

11 Mizprude1762 press 14 if ya wanna
     chat 2 a 14/f/cali
16 BLAKPower1413 14

(For the present purposes, a successful pickup is defined as one that elicits a cooperative response.) We see here a connection between a chat conversation and a developmental issue of major importance in the teen years: selection of friends and romantic partners. The use of the a/s/l code in conjunction with requests for numerals enables participants to seek and find someone who is willing to talk with them. We speculate that this enables participants in teen chat rooms to experiment with potential conversation partners in what is seemingly the low-risk environment of cyberspace.

Gender Identity

The physical disembodiment of gender in a chat room and the lack of other physical markers of identity pose particular challenges to the presentation of gender identity. Under these conditions, nicknames become the initial vehicle through which participants in chat rooms present their gender identity to others in the room—a kind of substitute for face and body. Subrahmanyam, Greenfield, & Tynes, (2004) suggest that screen names such as PinkBabyAngel542, MizRose76, Rollerbabe904590, and Mizprude1762 have a feminine connotation, whereas names such as Sportyman04, DustinKnosall, and AI commands have a masculine connotation. Apparently, it is known in online circles that this type of name attracts the attention of the opposite sex (Ali Lexa, personal communication, December 2002). Mizprude1762 as a screen name with a feminine connotation also reflects a concern with sexual relationships, albeit reactive to much of what is going on in the sexual domain in the chat room. Many of the screen names seem to use strong gender stereotypes, or what may be called "hyper gender signals." This notion that media simulations exaggerate gender signals into a hyper form was suggested by Francis Steen (personal communication May 9, 2002). The names seem almost to be a substitute for the use of the body (Greenfield, 2002), as a signal to proclaim identity, fit in with the peer group, and attract potential partners. These playful names seem to compensate for the absence of physical identity in dealing with these important adolescent concerns.

In sum, the chat room code being used by participants in a teen chat room helps the participants address important developmental issues, such as concern with their sexually developing bodies, romantic partner selection, and gender identity in an environment in which there is no physical embodiment of physical identity. The lack of cues about basic identity also influences how participants exchange information about their race/ethnicity and how they explore their racial/ethnic identity in chat rooms—issues that we address in the next section.

Racialized Discourse and Self-Representation in Teen Chat Rooms

Adolescence is also a time when youth explore their racial and ethnic identities. In the mid-1990s, the Internet was lauded for its potential to usher in a color-blind society (Smith & Kollock, 1999; Nakamura, 2000). It was argued that this new medium could eliminate racial cues from communication and lead to more egalitarian interaction between members of different groups. Though visual signifiers of race may be removed online, recent research on adults has shown that across a range of communication settings on the Internet (Kendall, 1998; Kang, 2000; Glaser, Dixit, & Green, 2002; Nakamura, 2002), race takes on a linguistic form through text provided by participants themselves. Once made visible in the text, race has been found to be central to many computer-mediated interactions. In fact, many of the social norms and ills that exist offline are often reproduced in adult online communities (Burkhalter, 1999). Despite the increasing availability of data on the racial dynamics of adult online communities (e.g., Bailey, 1996; Ebo, 1998; Kolko, Nakamura, & Rodman, 1999; Nelson, Linh, Tu, & Hines, 2001), there remains a dearth of research on the online race-related experiences of adolescents.

In the research study described in this section, Tynes (2003) explored whether race was salient in the online interactions of participants in monitored teen chat rooms and how they showed its importance linguistically. More specifically, this study was a virtual ethnography of racialized discourse and self-representation. As in the work described in the previous section, Tynes acted as participant observer in the chat rooms. She made 19 visits that lasted between 20 minutes to an hour between November 2001 and November 2002. She used the copy function to record the log of the chat conversation and pasted the transcript into a Word file. In all, the transcripts were between 10 and 20 pages long.

The participants, in line with much of the literature on adolescent identity development (Erikson, 1968; Marcia, 1980; Phinney, 1989), identified themselves on the basis of race both implicitly and explicitly, using racialized discourse. Implicit forms included using African-American English or Spanish, whereas the explicit forms involved self-identification, identifying in-groups, partner selection, and expressing racial attitudes. Here, we focus on the latter form of racialized discourse.

Self-Identification

The examples below show how participants transformed or extended the traditional way of identifying the self in chat culture via the a/s/l code to include their race or ethnicity. Note that each line was taken from a different transcript.

Mike125 14/m/nj white/tan/buff, loves softball
Draon, 15 italian m pa pic
CINNAMON: ne1 wanna chat wit a puerto rican
     hottie, press123, and im me

Here Mike125 says he is a 14-year-old male from New Jersey, who is white, tan, and buff, and who

also loves softball. Similarly, Draon says that he is a 15-year-old Italian male from Pennsylvania who has a picture (pic). Cinnamon also provides information about her ethnicity as she asks if anyone wants to chat with a Puerto Rican hottie. As noted in the previous section, participants in teen chat rooms spend much of their conversations discussing/presenting their identities in terms of age, sex, and location. Adding race or ethnicity to their conversation openers or greetings indicates that it is an important aspect of their sense of self.

Identifying In-Groups

In line with research indicating that ethnicity is more salient as an identity element to members of minority ethnicities compared to members of the majority (Phinney, 1989), Tynes (2003) found that people of color often took the lead in identifying themselves and in-groups on the basis of race; however, she found that white participants also explored identity through their discourse. In the transcript shown in figure 13.7, white teens, apparently prompted by blacks, ask about race. Fake identifies himself as a 14-year-old black male with caramel skin who weighs 165 pounds and is 56 inches tall (line 1). Weeb then asks any black people in the room to press 69 (line 4). He seems to also be aware that asking this question could be inter-

1. FAKE:	if you wana chat wit a black male 56 carmel weigh 165 press 15 im 14
2. Sandy:	*is that shybrat girl out yet>>*
3. Lillauren:	hi prepsxsuck
4. Weeb:	yo not to be mean or anything if u black press 69
5. FAKE:	56 thats my height
6. Lillauren:	if you are white, press 9832455
7. FAKE:	69
8. FAKE:	69
9. Weeb:	holla
10. Lillauren:	9832455
11. FAKE:	69
12. Jmoney:	69
13. FAKE:	lol
14. Lillauren:	9832455
15. Sandy:	9832455
16. BIGL:	9832455
17. Lillauren:	9832455

Figure 13.7. Example of racialized discourse for in-group identification in a monitored teen chat room.

preted as separating himself from others. Instead of his question inciting objections, he gets only positive responses from Fake and Jmoney. Immediately following the request for black people to identify themselves, Lillauren makes a request for whites to identify themselves by pressing 9832455 (line 6). Sandy (line 15) and BigL (line 16) respond by typing 9832455. Racialized discourse, in this instance as well as others in the data set, served as a sign to other participants that race was an acceptable topic of conversation and that it was acceptable to express the desire to talk to others like oneself.

Partner Selection

As illustrated in lines 1 and 6 in the extract below, participants also identified in-groups to find conversation partners who were of a certain sex, race, or ethnicity. Ethnicity and race are clearly part of the adolescent concern with romantic partner selection.

1 Na hill: BLACKS AND HISPANIC BOYS PRESS
        05
2 Nndiri: na hill got pic?
3 Na hill: NOPE U
4 LilRascal: is anyone in here like really chating
        or all you all just watchen the screen
5 Vargas: Hey ppl
6 Nndiri: 05 nope

Na hill asks black and Hispanic boys to press 05. In response to this request, Nndiri presses 05 (line 6). In line 2, Nndiri asks Na hill for a picture, and Na hill responds by saying "Nope U" in line 3. Nndiri then responds by typing "nope" (note he is responding to two questions at once in line 6) Race or ethnicity, for Na hill, appear to be enough to determine initial attraction and desire to speak to her interlocutors. Ten Have's (2000) paper on finding chat partners discusses the fact that chat participants log on to the chat room and enter what is akin to a market, where participants are both buyers and sellers. In this market, participants self-advertise and also shop by entering the a/s/l code. In Tynes's data, participants in teen chat rooms often asked for a person's race and indicated their own as a means of providing additional information on which to base their decisions to "buy" chat partners and initiate potential relationships.

Racial Attitudes

Participants also connected to chat partners by expressing their racial attitudes. In the extract below,

Secret1 and BigE discuss the usage of the word nigger *(the N word).*

1 SECRET1: IT BOTHER'S ME
2 SECRET1: I'M BLACK
3 BigE: how come

. . .

19 BigE: see this is how i look at it
20 Punch: oh yeah
21 JVADOK: smurf mustangs dont suck they rock
22 Kandy: zzzzzzzzzzzzzzzzzzzzzzzz

. . .

35 BigE: if they say it and it ends with an A and comin from another black person it doesn't bother me, but if it ends in er I get offensive

In lines 1 and 2, Secret1 states that the use of the N word bothers him because he is black (in the N word transcript not shown here, the participants identify themselves as males). He appears to be trying to get people not to use the word at all. BigE says that the presence of the postvocalic r makes a difference. In African-American English, the r sound is often dropped so that words like player become playa and store become sto. If the N word is said without the r, it is often a term of endearment used by people in particular communities of African Americans. BigE argues that a person must have ethnic and linguistic membership in the black community to be able to say this word; otherwise the "get[s] offensive" (line 35).

To conclude, Tynes's analysis indicates that race is just as salient for participants in online teen chat contexts as it is for participants in adult chat contexts. Even more important, it appears that race is no longer taboo, unlike in many conventional face-to-face settings. All teens, not just teens of color as the literature suggests (Phinney, 1989), appear to be exploring ethnic and racial identities. In fact, it would appear that the prevailing interaction in chat rooms impels whites to talk about race/ethnicity and encourages interethnic interaction that may otherwise be limited in offline contexts. Her analysis indicates that through racialized discourse, teens may be socializing one another into ways of thinking about race and that much of what is learned in the monitored context may be positive.

In the previous sections, we presented research that showed that adolescents are using IM and chat rooms for daily interpersonal communication to keep in touch with friends, play, and express their emerging sexual and racial identities. In the next

section, we present research that describes how adolescents are using the Internet as an information source to address questions about their physical and sexual health. We learn that in an anonymous bulletin board setting for teens, participants ask highly personal questions and receive advice from their peers.

Peer Advice in Cyberspace: Health-Related Bulletin Boards for Teens

The many physical, social, and cognitive changes that take place in adolescence can elicit numerous health and relationship-based questions among youth (e.g., Malus, LaChance, Lamy, Macaulay, & Vanasse, 1987; Joffe, Radius, & Gall, 1988; Klein & Wilson, 2002). Unfortunately, teens are often reluctant to reveal personal problems to others (e.g., Ackard & Neumark-Sztainer, 2001; Cheng, Savageau, Sattler, & DeWitt, 1993). Teens are also reluctant to discuss personal health questions with their physicians (Ackard & Neumark-Sztainer, 2001). In one study, 86% of adolescents reported that they would go to their physicians for problems such as "a bad sore throat," but only 43% stated that they would confide in their physicians about more private health concerns such as pregnancy and substance abuse (Cheng et al., 1993).

Many teens are reluctant to seek advice about personal health concerns because of fears about confidentiality (Ackard & Neumark-Sztainer, 2001; Cheng et al., 1993; Rideout, 2002). For example, adolescents often express a fear of discussing sex with a physician—because of the potential disclosure of information to parents—out of embarrassment or inhibition (Hassan & Creatsas, 2000). Thus, the anonymity of the Internet may be an ideal place for teens to search for health information without having to reveal personally identifying information. Online health advice can be found on Web pages, newsgroups, Lisservs, chat rooms, and bulletin boards (Hsiung, 2000; Sharp, 2000). Online health sites are also beneficial in that advice is available 24 hours a day (Fox & Rainie, 2000) and can be received from a huge number of peers worldwide (Finn, 1999; White & Dorman, 2001).

However, are teens using online health resources, and if so, what questions are being asked over the Internet? To address the question of teen

health advice in cyberspace, Suzuki and Calzo (in press) explored the content on a popular health support Web site for teens that used a peer-generated bulletin board format to facilitate discussion about adolescent health and relationship issues. Analyses were conducted on the questions found on 273 bulletin threads (103 threads from a general teen issues bulletin board, and 170 threads from a teen sexual health bulletin board) collected on the site over a 2-month period. Visitors on this site anonymously post questions without revealing their identity (pseudonyms are used). Furthermore, adolescents can also anonymously "lurk" on the site by clicking to view the questions and responses posted by others without posting personal responses.

Content analysis was used to classify the range of topics reflected in the threads. One researcher read all 273 of the initial posted questions found on both boards. The main topic of each question was summarized briefly (e.g., side effects of the birth control pill) and inductively grouped and collapsed according to similarity of topic to form an initial set of categories. A second researcher independently took 20% of the threads on both boards and created a separate set of categories. The two category sets were then compared and collapsed by both researchers to form the final set of 14 question topic categories: Parents/Adults, Peers, Romantic Relationships, Personality/Mental Health, Grooming, Body Image/Exercise, Physical Health, Sexual Health, Pregnancy/Birth Control, Sexuality—Interpersonal, Sexuality—Preferences/Techniques, Physical/Sexual Abuse, Drugs/Alcohol, and School. (For examples of questions in each category, see table 13.1.)

Intercoder reliability was calculated by having two coders independently categorize 20% of the threads randomly selected from each board. The kappa statistic for the intercoder reliability was 0.85, which is in the excellent range (Fleiss, 1981). The content of the two boards was combined for the kappa statistic as well as for subsequent analyses. Analyses of the questions posted on these boards revealed that 181 people posted an average of 1.5 questions during the 2-month period. Table 13.2 shows the total number of posts, percentage of posts, mean number of replies, and mean number of views for each of 14 question types. (For a detailed analysis of the types of replies posted in this study, see Suzuki & Calzo, 2004).

The largest proportion (27%) of questions posted concerned sexual health and included questions about topics such as ejaculation problems, penis size and shape, menstruation, and vaginal infections. When divided into questions asked on both boards, the largest proportion of questions on the teen health board was about romantic relationships (36.9%), and for the sexual health board, not surprisingly, it was sexual health (41.8%). Thus, questions about interpersonal relationships and sexuality were the most frequently asked questions for this teen population. Questions referring to issues concerning physical/sexual abuse (0.7%) and drugs/alcohol (0.7%) were posted least frequently. This focus on sex and romantic relationships reflects a key adolescent concern and was also found in the chat room study described earlier (Subrahmanyam, Greenfield, & Tynes, 2004).

Different questions also elicited different quantities of responses. Questions about body image and exercise garnered the most replies from other posters (M = 10.6 replies per question). Questions about the interpersonal aspects of sex (M = 8.9), grooming (M = 8.3), physical and sexual abuse (M = 8.0), sexual preferences and techniques (M = 7.9), and pregnancy/birth control (M = 7.7) also averaged more than seven replies per question. Internet posters were least likely to respond to questions about parents/adults (M = 2.5), drugs and alcohol (M = 4.5), and romantic relationships (M = 4.9).

The number of views, or "lurks," also varied by question type. Views refer to the number of times that Internet surfers clicked on a thread to read it, even if they did not directly reply to it or participate in the discussion thread. Those who are shy about revealing themselves but who still desire information can "lurk" in online groups, reading other people's messages without active participation (King & Moregg, 1998; Winzelberg, 1997). Thus, the number of views may be a rough measure of subject interest in the topic. Questions relating to the interpersonal aspects of sex solicited by far the greatest number of average views per question (M = 480.9). Also popular were questions about grooming, sexual preferences and techniques, sexual health, and peer relationships. Question types with the least number of views included pregnancy/birth control (M = 114.9), school (M = 125.7), and parents/adults (M = 142.0). Analyses of views for abuse could not be carried out, be-

cause all of the subject topic headings for these threads were rated as "unclassifiable."

The results of this study revealed that adolescents were indeed using Internet bulletin boards to ask personal health questions. In fact, the most frequently asked questions referred to issues of sexual health, romantic relationships, pregnancy/birth control, and sexual preferences/techniques. Questions about sexuality were also of great interest to people who anonymously "lurked" on the site without posting responses, as indicated by the large number of views found for those threads. What makes these results particularly interesting is the fact that although teens are reluctant to seek face-to-face advice about sexuality from physicians and others (Ackard & Neumark-Sztainer, 2001; Cheng et al., 1993; Malus et al., 1987), these questions were the most popular ones posted on an online bulletin board. Thus, Internet health bulletin boards possibly help to circumvent the awkwardness associated with asking sexual and relationship questions in face-to-face encounters. It is therefore clear that teens are using the Internet to ask questions that may be embarrassing for them to ask in their off-line environments. Once again, the Internet provides a space for adolescents to explore their

Table 13.1. Question category codes and examples.

Initial question category	Examples
Parents/Adults	"I'm embarrassed around my mom." "I lied to my parents about where I was going."
Peers	"I am not mean to anybody but for some reason nobody likes me!! HELP!!! My basketball teammates all don't like me but I don't know why. I am always nice to them!!" "I feel awkward hugging and kissing my girlfriend with everyone around."
Relationships—Romantic	"How do I ask a girl out, or at least talk to her?" "I feel like I'm going insane! Sometimes I feel like I want to cry about everything but I just can't"
Personality/mental health	"I just want to gain the self-confidence to feel better about me ... where do I start?"
Grooming	"I have a question about shaving 'down there'." "I am just curious, why do girls get their bellies pierced?"
Physical health	"I would really like to drop 10 lbs in the next 2 months." "I feel so fat compared to some of my friends who wear such small sizes."
Body image/exercise	"Will I get skin cancer if I only go tanning for two weeks?" "I have a problem with a lot of sweat coming from my underarms."
Sexual health	"I have a hooked penis, do you know how to fix this?!?! PLEASE HELP ME!!" "After having an orgasm is it normal to have white discharge looking stuff?"
Pregnancy/birth control	"Just curious, which would be better, the pill or shot for birth control?" "He came on my stomach ... could it have went inside of me and gotten me pregnant?"
Sexuality—interpersonal	"Is it normal to kiss someone with your mouth open but no tongue?" "Anyone have tips for keeping the urge of ejaculating down?"
Sexuality—preferences/technique	"My boyfriend wants to have sex and I agreed, but now I don't want to ... I'm afraid that if I say no he'll break up with me." "I really don't like performing oral sex on my boyfriend."
Physical/sexual abuse	"My stepsister ... was beaten a lot by her uncle when she was young." "He took his hand across my cheek twice ... what was I to do?"
Drugs/alcohol	"Are there a good number of people that go to high school parties that don't drink?"
School	"Should I take Human Bio or AP Bio? Which one looks better when applying for college?" "I hate going to school, I don't want to wait til I'm 16 to do homeschooling."

From Suzuki & Calzo, in press.

Table 13.2. Frequency of question topics.

Question type	Total (N = 273)	% of total	Mean replies	Mean views
Sexual health	73	26.7	5.3	245.5
Romantic	46	16.8	4.9	170.6
Pregnancy/birth control	41	15.0	7.7	114.9
Sex, preferences/technique	24	8.8	7.9	314.0
Physical health	19	7.0	5.2	158.1
Sex, interpersonal	16	5.9	8.9	480.9
Grooming	14	5.1	8.3	348.8
Body image/exercise	13	4.8	10.6	175.2
Parents/adults	6	2.2	2.5	142.0
Peers	6	2.2	6.5	237.8
Personality/mental health	6	2.2	5.5	167.7
School	5	1.8	6.0	125.7
Abuse	2	0.7	8.0	N/A
Drugs/alcohol	2	0.7	4.5	176.3
Total/mean total	273	100	6.4	222.0

From Suzuki & Calzo, in press.

identities and address their concerns—particularly regarding sexuality and romantic relationships—in the anonymity of cyberspace.

Conclusions

We have found that online communication is the most popular of all Internet uses among youth, with IM being the most popular of the Internet communication modalities. In other words, our research confirms that today's teenagers are indeed the IM generation. In the area of identity, we have found that a substantial group of teenagers do experiment with identities on the Internet, and equally, that they use new codes (such as a/s/l) to express identity in this disembodied medium. In the social domain, our chat and bulletin board studies show that the Internet is being used by teenagers to seek peer support and romance, and our daily report research reveals that most communication is, nonetheless, with friends and family. Indeed, contrary to popular myth, even identity experimentation is mainly with friends and family, not strangers. Concerning difficult issues, our chat and bulletin board studies indicate that adolescents do use the Internet to discuss race, sex, and illness. In the case of race, a subject that is normally taboo in social settings becomes prevalent in Internet communication.

In addition, our analysis of the codes of chat indicates that a common peer culture has been created through Internet communication. One aspect of this culture is the use of abbreviated linguistic codes such as a/s/l, another aspect of this culture is the cognitive habit of multitasking, with multiple Internet windows open simultaneously. Still other aspects of this online culture relate to conventions for keeping track of conversations in multiparty Internet settings.

Most striking perhaps is how essential concerns of adolescence are integrated into this new medium in new ways. For example, teens may be too embarrassed to seek information on sex from parents or friends, but they can openly ask these questions on a teen bulletin board. Gender identity that would normally be conveyed by body and dress is now conveyed by nicknames in a teen chat room. Racial identity, normally stronger in minority group members, is made more explicit in members of the majority by interracial discussion of ethnic membership that would usually be obvious in a face-to-face setting. What are the effects of the Internet in all these areas of adolescent development? These critical questions remain for our future research

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