Technology Mediated Dispute Resolution (TMDR): A New Paradigm for ADR

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I. INTRODUCTION

It is fascinating to watch a thirteen-year-old communicate with his or her friends over the Internet. At any given moment, a seemingly limitless number of conversations will be proceeding simultaneously. When you ask, "How can you do that?" the brief reply is simply, "It's easy, no big deal."

Now use your imagination and scroll ahead a mere twelve years. Our thirteen-year-old is twenty-five years old, has finished graduate school or law school, and once again is participating in and monitoring a seemingly limitless number of conversations simultaneously over the Internet.[1] Only this time he or she is formally working as a neutral: identifying interests,

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[1] You may not need to scroll forward twelve years. Because our thirteen-year-old will have technology mediated communication skills that many of us do not possess, he or she may discover a demand for his or her communication skills before it is time to attend, and perhaps without ever attending, a graduate or professional school. Teenagers are being regarded as the Instant Message generation, willing to use the Internet to discuss sensitive issues such as race, sex and health. Their proficiency and comfort with multitasking is evidenced by the ability to keep multiple Internet windows, and multiple conversations, open simultaneously. *See* Patricia M. Greenfield et al., *Teens on the Internet: Interpersonal Connection, Identity, and Information*, *in* DOMESTICATING INFORMATION TECHNOLOGIES (Robert Kraut et al. eds., forthcoming Mar. 2006) (manuscript at 24, *available at* http://www.cdmc.ucla.edu/downloads/Teens.pdf (last visited Feb. 18, 2006)).

issues, and problem solving as he or she moves from conversation to conversation. Welcome to our brave new world.[2]

If you are paying attention today, then this scenario will not be a surprise. The ability to engage in multiple conversations simultaneously and problem solve online is one of the skills being developed right now by our thirteen-year-old future neutral. But for many of us it will come as a surprise because, quite frankly, most of us are not paying attention.

In fact, a very real generational disconnect is developing between many current dispute resolvers, including commentators and theorists, and the children who are learning to live their lives through technology mediated communications. On the one hand, for example, formidable figures in the dispute resolution field are preaching "mindfulness" and self-awareness. Professor Leonard Riskin uses the phrase "mindfulness meditation."[3] He urges us to slow down, contemplate and know ourselves, gather our energies and focus our attention on the moment. Yet on the other hand, millions of children are learning the skills necessary to survive in a world where technology is ubiquitous. That world, our world, soon will move at a pace that by today's standards will be nothing short of blinding.

One cannot say that dispute resolution practitioners and academics are ignoring technology. Attention tends to focus, however, on two questions. First, how can one use technology to enhance existing dispute resolution processes? And second, how can an environment of trust be established in cyberspace so that "we," meaning adults, will feel comfortable transacting business and resolving disputes online?[4]

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[2] ALDOUS HUXLEY, BRAVE NEW WORLD (Harper Perennial 1998) (1932). But honestly, not to worry, our new world will not go as terribly wrong as Huxley's. Have hope if not confidence.

[3] Leonard L. Riskin, *Mindfulness: Foundational Training for Dispute Resolution*, 54 J. LEGAL EDUC. 79, 83 (2004). Professor Riskin, who writes frequently about mediation, explores the notion of mindfulness "meditation," not "mediation."

[4] *See* ABA TASK FORCE ON ELECTRONIC COMMERCE AND ALTERNATIVE DISPUTE RESOLUTION, ADDRESSING DISPUTES IN ELECTRONIC COMMERCE (2002), http://www.law.washington.edu/ABA-eADR/documentation/docs/FinalReport102802.pdf; Thomas Schultz, *Does Online Dispute Resolution Need Government Intervention? The Case for Architectures of Control and Trust*, 6 N.C. J. L. & TECH. 71, 71 (2004); Cynthia L. Corritore, Beverly Kracher & Susan Wiedenbeck, *On-line Trust: Concepts, Evolving Themes, A Model*, 58 INT'L J. HUM.-COMPUTER STUD. 737, 737 (2003). *But see* Robert M. Bastress & Joseph D. Harbaugh, *Taking the Lawyer's Craft into Virtual Space: Computer-Mediated Interviewing, Counseling, and Negotiating*, 10 CLINICAL L. REV. 115, 126 (2003). Bastress and Harbaugh do not simply make general recommendations about how technology might increase one's efficiency. *Id.* They invest the time to review social science research about computer mediated communications and they make suggestions for

But those questions may not be the critical ones for the near future. The children who soon will become adults will want dispute resolution processes that take advantage of the technologies they already have mastered. They will approach the interplay of dispute resolution and technology in reverse, at least as compared to current dispute resolvers. The next generation will not be asking how technology can enhance existing dispute resolution practices and models. Because they will be comfortable using technology to communicate, they instead will want to know what dispute resolution processes they can use in the virtual spaces where they live. They will be searching for dispute resolution processes to complement their technology, not technology to complement their dispute resolution models and practices.

The next generation also may not need the same assurances that we need in order to engage in a variety of technology mediated activities. Our children already trust technology and believe that virtual spaces are appropriate venues for addressing the most serious issues in their lives.

Children increasingly rely upon technology. There is a general consensus that certainly not all computer activities are helpful.[5] Given the need to boot up and log on, check for viruses and spyware, learn platforms and interfaces just to begin a task, find files, download, update, respond to error messages, and overcome hardware and software failures, children may be doing little more than learning how to use computers instead of learning how to think.[6]

But because there is no consensus about whether young children should use technology, and because parents apparently are determined to expose

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interviewing, counseling, and negotiation based on that research. *Id.* at 138. They do not, however, address whether any generational differences exist regarding individuals' ability and propensity to use technology mediated communication.

[5] Even so-called educational software applications may reduce a child's creativity and imagination if the activity involves too many repetitive, passive exercises. This type of software may also reduce motivation if the desired result is achieved too effortlessly, takes too much time away from physical and motor development, shortens attention spans because the child's attention is being managed by the software, and confuses information collection with more advanced intellectual activity. *See* Leslie Bennetts, *Do Computers Make Kids Smarter?*, FAM. PC MAG., Sept. 1999, http://www.rrcc-online.com/~julies/cis281/familypc.htm. (Family PC Magazine was merged into Family Internet Life Magazine in 2001).

[6] *Id.* Researchers disagree, however, and some argue that when children use the Internet, they become initiators, seekers, learners, and debaters. These researchers point out that four- and five-year-olds have experienced an average six point IQ increase after nine months of computer use. *Id.* (citing Don Tapscott, author of *Growing Up Digital: The Rise of the Net Generation* and Southeast Missouri State University Child Development Expert Susan Haugland about computer use by four and five year old children).

their young children to computers, video, and other technologies regardless of recommendations to the contrary,[7] the undeniable fact is that technology is a central component of our children's growth and development. That fact leaves the dispute resolution community with important questions that this article will address.

How is technology changing the way that our children communicate?[8] What are the social scientists discovering? How are children using mobile phones, text messaging, and computers to initiate and strengthen relationships? How are television, video, avatars,[9] and verbots teaching our children to interact? What are the implications for dispute resolution? And finally, will current teaching about dispute resolution, such as the call for mindfulness meditation, resonate with dispute resolvers entering the field in the very near future, or will those instructions be perceived as romantic and idyllic, but nevertheless antiquated, notions about human interaction that have little relevance in the brave new world?

II. MEDIATED COMMUNICATION

A. *Technology Mediated Communication*

It can be thrilling or, upon reflection, disturbing to realize how rapidly our lives are moving online. We pay bills, find new friends, partners, and spouses,[10] divorce our spouses,[11] research topics ranging from recreation to

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[7] *See infra* note 217 and accompanying text.

[8] The research raises an interesting "chicken or egg" question. Social science researchers confess that when trying to measure the impact a particular technology has on society, it is difficult to empirically distinguish changes associated with the use of technology from changes that are caused by the users' choice as to how to employ the technology. Unmeasured personal and social characteristics may control choices. *See* Malcolm Brynin & Robert Kraut, *Social Studies of Domestic Information and Communication Technologies*, *in* DOMESTICATING INFORMATION TECHNOLOGY (Robert Kraut et al. eds., forthcoming Mar. 2006) (manuscript at 21–22, *available at* http://www-2.cs.cmu.edu/~kraut/RKraut.site.files/articles/Bymin04-SocialStudiesOfICT.pdf (last visited Feb. 18, 2006)). For purposes of this article, the most immediate concern is the fact that behaviors are changing, not the causal question. Yet the question of whether changes in society and culture are caused by something inherent in the technology, or because users themselves choose to utilize technology in a certain way, is relevant to the question of how dispute resolution processes will be altered by technology and whether those changes can be influenced.

[9] *See infra* notes 208–260 and accompanying text.

[10] Two studies concluded that only about 10% of Internet users actually make new personal connections online. Jeffrey Boase & Barry Wellman, *Personal Relationships:*

health to financial investments, and discover entire communities with shared interests online. But as comfortable as we are with online information retrieval and communication, our children are integrating technology into their lives in ways that take our breath away. Their reliance upon, and intuitive use of, technology has significant implications for dispute resolution processes.

For instance, young teens and pre-teens are embracing text messaging enthusiastically. Messaging technologies tend to strictly limit the number of characters that can be included within each message. Consequently, the need to perfect the ability to communicate in an abbreviated fashion will, if anything, become more commonplace. Even if you are not enamored of the new shorthand, your children are embracing and creating new terminology daily. When they receive the message "SUP 4 NXT WKND?" for instance, they may quickly reply "WAN2 C A PIC?"[12]

Cryptic messages are not merely stylistic. Short messaging service (SMS), which supports rapid message transmission, is generally limited to 160 characters and spaces per message. Children are communicating in a clipped, rapid manner that does not provide much opportunity for subtlety or nuance.[13]

The term "computer mediated communication" (CMC)[14] often is used to describe online communications. It may be more appropriate, however, to

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On and Off the Internet, in HANDBOOK OF PERSONAL RELATIONS (Dan Perlman & Anita L. Vangelisti eds., forthcoming 2006), *available at* http://www.chass.utoronto.ca/~wellman/publications/personal_relations/PR-Cambridge-Boase_Wellman%20-%20ch2%20-final.%20doc.htm (last visited Jan. 16, 2006).

[11] For an example of two online divorce services, see www.completecase.com and www.legalzoom.com, where spouses can get divorced for $249.00.

[12] Text abbreviations are intuitive. It is apparent that when asked what is happening next weekend, one in turn can ask if the questioner wants to see a movie. Described as "linguistically unremarkable and communicatively adept," stylized abbreviated text messages have the required attributes of "speed and brevity, paralinguistic restitution, and phonological approximation." Crispin Thurlow, Generation Txt? The Sociolinguistics of Young People's Text-Messaging (2003), http://www.shu.ac.uk/daol/articles/v1/n1/a3/thurlow2002003-01.html. In other words, text messages are easy to understand, in contrast perhaps to the preceding quotation.

[13] To facilitate faster text messaging, which makes matters worse or better depending on one's point of view, some mobile phones offer "predictive text," wherein one need only press one character in order to recall a word. *See id.* at 3.1.

[14] For a discussion of CMC theory, see Joseph B. Walther & Malcolm R. Parks, *Cues Filtered Out, Cues Filtered In: Computer-Mediated Communication and Relationships, in* HANDBOOK OF INTERPERSONAL COMMUNICATION (Mark L. Knapp & John A. Daly eds., 3d ed. 2002).

use a new terminology and frame the discussion in terms of technology mediated communication (TMC).[15] Wireless cellular telephones and satellite support systems now supplement Internet communications with audio, text, and video capabilities. Individuals can be connected to the world essentially everywhere and anytime.[16]

B. *Computer Mediated Communication (CMC)*

But much still can be learned by examining CMC in isolation because, at least until recently, CMC offered a relatively pure opportunity for studying language and communication. Researchers observed that individuals who use e-mail, instant messaging, chat rooms, and bulletin boards relied almost completely on language and did not introduce physical appearance, vocal pitch, body orientation, and other cues that exist in other types of communication.[17] With the introduction of more sophisticated graphics, avatars, and the improving ability to send one's image along with one's voice, however, many of those cues can be reintroduced through technology mediated communication.

Yet we should not ignore the possibility that there may be something uniquely valuable about text-based communications. The fact that computer-integrated video cameras are available for as little as ten dollars, combined with the fact that the cameras are not being widely adopted, suggests that the

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[15] A related term that appears in the literature refers to "information and communication technologies" ("ICT"). *See infra* note 155. One also may encounter the term "computing and communication technologies" ("CCT"). *See* Colin Lankshear & Michele Knobel, "New" Literacies: Research and Social Practice, Plenary Address, at the Annual Meeting of the National Reading Conference (Dec. 2, 2004), http://www.geocities.com/c.lankshear/nrc.html?200525.

[16] Wireless connectivity clearly is increasing. A recent Pew Internet Project Survey reports that 17% of all Internet users have used wireless connections and that 28% of 18- to 27-year-olds have used wireless devices. Lee Rainie, Pew Internet Project Data Memo: Latest Internet Tracking Data (Apr. 13, 2004), http://www.pewinternet.org/pdfs/PIP_April2004_Data_Memo.pdf. In March 2004, 18% of American adults reported that they had used a wireless-enabled laptop and 29% of cell phone users stated that they had used a cell phone from which they could exchange e-mail messages. Nearly one-half (45%) of those who are 18 to 27 have cell phones that can access the Internet. John B. Horrigan, Internet Project Data Memo: 28% of American Adults Are Wireless Ready (May 2004), http://www.pewinternet.org/pdfs/PIP_Wireless_Ready_Data_0504.pdf.

[17] Joseph B. Walther, *Language and Technology: Introduction to the Special Issue*, 23 J. LANG. & SOC. PSYCH. 384, 388 (2004).

anonymous and asynchronous capabilities of text-only messaging are important for certain types of communication.[18]

Research examining computer mediated communication has emphasized either the capacity to perform certain tasks (the "task-oriented model") or the ability to communicate emotions (the "social-emotional-oriented model").[19] Law Professors Robert Bastress and Joseph Harbaugh provide a wonderfully succinct summary of three theories that support the task-oriented model of computer mediated communication. Social Presence, Media Richness, and Social Context Cues theories, on the one hand, take the view that because computer mediated communication lacks the nonverbal clues available in face-to-face meetings; CMC is best suited to performing discrete tasks.[20] This viewpoint is commonly referred to as "cues filtered out."

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[18] *Id.* at 391–92. Walther notes that, ironically, adding video can prove distracting and that sometimes less is more. *Id.* at 392.

[19] *See* Bastress & Harbaugh, *supra* note 4, at 129.

[20] *Id.* at 130. My efforts to improve Bastress and Harbaugh's excellent summary merely would be redundant:

> Social Presence Theory attempts to articulate the level of "psychological presence" that can be attained in a communications medium. The fewer the communicative channels, the lower is the degree of social presence and the more impersonal will be the communication. FTF communication is high in social presence because all verbal and non-verbal channels are present. CMC, on the other hand, is low in social presence because all of the visual and aural non-verbal channels are missing, leaving only the text message. Media Richness Theory concentrates on the communication goal of resolving ambiguity and reducing uncertainty. Advocates of this model assert that communication media can be positioned along a rich-lean continuum based on the medium's capacity for processing equivocal information. Media richness, according to these theorists, depends upon the mixture of several criteria including: (1) the availability of instant feedback making it possible for communicators to converge quickly upon a common interpretation or understanding; (2) the capacity of the medium to transmit multiple cues, such as body language and voice tone, to convey interpretations; and (3) the personal focus of the medium to convey feelings and emotions that infuse the communication. Media rich theorists concluded that FTF communications are "rich" and suited for occasions when messages are ambiguous; CMC (e.g., e-mail), on the other hand, is "leaner" and more appropriate when the communication is unambiguous. Social Context Cues Theory compares communication media on the basis of the amount of information that can be exchanged by the transmission of "social context cues." People perceive others through both static and dynamic social context cues. Static cues come from the individual's appearance. Dynamic cues come from the individual's behavior, such as frowning with unhappiness and nodding approval. According to social context cues theory, CMC environments have the fewest and FTF settings have the greatest social context communication cues. For the sake of space and readability, we have omitted references to the extensive research we reviewed in developing this

The social-emotional-oriented model, on the other hand, asserts that individuals can establish social identities, create relationships, and maintain relationships through online communications. Because communicators have undeniable needs for affinity and uncertainty reduction, they will adapt technology mediated communication to satisfy those needs.[21]

Virtually everyone agrees that CMC has its limitations. But much depends upon whether CMC is used to support synchronous or asynchronous communications. Researchers who focused on asynchronous communications were more likely to conclude, perhaps not surprisingly, that CMC supports relational behaviors.[22]

This article incorporates research conclusions from both the task-oriented models and, more importantly for this article, from the social-emotional-oriented models. Because this article focuses on a different demographic than the Bastress and Harbaugh article (which explores computer mediated interviewing, counseling, and negotiation), most of the research studies reviewed, analyses presented, and conclusions asserted will not repeat what was done in the Bastress and Harbaugh article.

The Bastress and Harbaugh article submits that the "more reasonable view" is that individuals can compensate for CMC's shortcomings if they have enough time and are sufficiently motivated.[23] This article asserts that the horse already has left the barn, or to update the idiom, the avatar already has left the virtual space. The next generation is mastering many more technology mediated communication mediums than text alone. Our children will not have to be instructed regarding technology mediated communication and may not wait patiently for the rest of us to learn how it is done.

III. DO WE USE TECHNOLOGY DIFFERENTLY?

A. *Does Age Matter?*

The author tries to avoid drawing distinctions between "us" and "them." There certainly are individuals well past the legal voting age, for instance,

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summary of the three task-oriented theories. We would be happy to provide references on request.

Id. at 130 n.53.

[21] *See id.* at 132.

[22] *See id.* at 133.

[23] *Id.* at 134–35.

who are extremely experienced communicating online.[24] "Early adopters" began experimenting with computers decades ago, using computers somewhat painstakingly to exchange messages long before we had the almost instant power of today's Internet.

Yet there is a distinction between those of us who have learned to use new technologies as adults and our children. Our children are learning to communicate with technology at the same time they are learning their most basic communication skills, and that makes their ability to use technology much more intuitive.

A Kaiser Family Foundation Report published in the fall of 2003 explores the extent to which the lives of children six years old and younger are immersed in electronic media.[25] One of only a few national surveys that address this topic, it reports information collected from more than one thousand parents who have six month to six year old children.[26] Some of the information may be surprising. And please keep in mind that this data was collected in the spring of 2003, and that the numbers certainly will be higher today.

Approximately one half (48%) of all children six years of age and younger already had used a computer and that percentage increased to 70% for four- to six-year-olds.[27] More than 25% of the four- to six-year-olds used a computer every day, typically for more than an hour (1:04).[28] More than one half of the four- to six-year-olds had used a computer by themselves, 64% knew how to point and click with a mouse, 37% had turned on computers without assistance, and 17% had sent an e-mail message (with assistance from a parent).[29] Parents are encouraging their young children to

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[24] Internet use continues to increase for all age groups, although the rate at which American adults are going online has slowed. One report found that 63% of American adults use the Internet and that Internet use by 18- to 29-year-olds rose to 83% in August 2003. MARY MADDEN, PEW INTERNET & AMERICAN LIFE PROJECT, AMERICA'S ONLINE PURSUITS: THE CHANGING PICTURE OF WHO'S ONLINE AND WHAT THEY DO 6 (2003), http://www.pewinternet.org/pdfs/PIP_Online_Pursuits_Final.PDF.

[25] VICTORIA J. RIDEOUT, ELIZABETH A. VANDEWATER & ELLEN A. WARTELLA, KAISER FAMILY FOUNDATION, ZERO TO SIX: ELECTRONIC MEDIA IN THE LIVES OF INFANTS, TODDLERS AND PRESCHOOLERS (2003), http://www.tri-vision.ca/documents/2003/0to6Report.pdf.

[26] *Id.* at 2; *see also* Deborah S. Weber & Dorothy G. Singer, *The Media Habit of Infants and Toddlers: Findings from a Parent Survey*, ZERO TO THREE, Sept. 2004, at 30, http://www.zerotothree.org/vol25-1b.pdf.

[27] RIDEOUT ET AL., *supra* note 25, at 5.

[28] *Id.*

[29] *Id.*

use computers and 72% believe that computers "mostly help" learning while only 5% believe that computers "mostly hurt" learning.[30]

But here is perhaps the most striking statistic. More than one quarter (27%) of the zero to three-year-olds had used a computer without sitting in their parents laps.[31]

The numbers predictably continue to be more compelling. The most recent information released in February 2005 states that 77% of children six years old and younger have used a computer.[32] And almost one half of the children who had used a computer could turn it on without assistance and insert a CD-ROM.[33] The percentage of children two years old and younger that have used computers is reported to be 21% and the percentage for three- to four-year-olds is 58%.[34]

The fact that children are communicating through technology during their formative years guarantees that, as they mature, those children will continue to rely on technology in a myriad of contexts.[35] And their expectations as to what is possible with technology assuredly will exceed their parents' expectations.

Many alternative dispute resolution academicians and practitioners accept that ADR practice already is becoming a hybrid of offline and online activities. It is doubtful, however, whether many believe that virtual spaces may become the primary venue for dispute resolution or whether many recognize how quickly this change may occur. Regardless of what you and I think about the optimum environment for dispute resolution, our children will resolve disputes relying heavily on technology. The next generation will

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[30] *Id.* at 8.

[31] *Id.* at 5.

[32] Press Release, Georgetown University, Children's Digital Media Center, Research Examines Early Childhood Computer Use (Feb. 17, 2005), http://cdmc.georgetown.edu/about_press.cfm.

[33] *Id.*

[34] Press Release, Georgetown University, Children's Digital Media Center, Children, TV, Computers and More Media: New Research Shows Pluses, Minuses (Feb. 11, 2005), http://cdmc.georgetown.edu/about_press.cfm.

[35] GRUNWALD ASSOCS. & CORP. FOR PUB. BROAD. (CPB), CONNECTED TO THE FUTURE (2003), http://www.cpb.org/stations/reports/connected/connected_report.pdf [hereinafter CONNECTED TO THE FUTURE]. Preschool children between the ages of two and five are among those moving online the fastest. Whereas only 6% of this age group used the Internet in 2000, by 2002 35% of that group went online. *Id.* at 3. There is little reason not to assume that the number of young children moving online between 2002 and 2004 has increased at least as rapidly as it did between 2000 and 2002.

demand dispute resolution processes designed specifically not only for the online environment, but also for the wireless environment.

We have a generation of children who are communicating at a speed and in a manner that sometimes confounds the imagination. It is not uncommon to find our children participating in ten or more IM conversations simultaneously.[36] Their ability to multitask is dazzling. That advanced ability to multitask, combined with the desire to communicate in an abbreviated accelerated manner, suggests that the next generation will not be content with the models and approaches traditionally offered for resolving disputes. And not only will they be unwilling to travel to a single location at a specific time to explore interests and issues, they may be unwilling to use traditional models even when an attempt has been made to adapt those models to the online or wireless environment.

B. *Does Gender Matter?*

Research concerning how girls and boys use computers suggests that there are differences based upon gender.[37] A 2005 study involving 250 middle school students from twelve schools (median age 12.5 years) concludes that girls define computers as multi-functional tools that help with friendships, homework, research, organizational tasks, and task efficiency.[38] Boys had a more narrow view and saw computers as machines, toys, and sophisticated calculators.[39] In terms of importance, girls perceived computers as communication tools, productivity tools, and multi-purpose tools, while boys saw a machine for entertainment and gaming, thinking, and retrieving information.[40]

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[36] America Online/Digital Marketing Services, Inc., "Youth Wired", survey conducted in Opinion Place, www.opinionplace.com reports that 33% of children who use instant messaging exchange messages with three or more other individuals at the same time.

[37] *See* Alice A. Christie, *How Adolescent Boys and Girls View Today's Computer Culture*, MERIDIAN: A MIDDLE SCH. COMP. TECH. J., Winter 2005, at 8, http://www.ncsu.edu/meridian/win2005/computer%20culture/index.html. *But see* RIDEOUT ET AL., *supra* note 25. This study focused on children under six years old and reports that when they first begin using media, boys and girls develop comparable television, video, music, and computer related skills and interests. Gender differences develop, however, as the children enter the four- to six-year-old age group. *Id.* at 11.

[38] Christie, *supra* note 37, at 2.

[39] *Id.*

[40] *Id.*

Girls use computers to communicate by sending e-mails to friends and family, chat, make new friends, communicate with classmates daily via instant messaging, and connect and flirt with boys.[41] Boys' uses were competitive, often violent war games or sports games.[42]

As technology mediated communication becomes a more integral part of dispute resolution, it will be interesting to see how gender preferences and inclinations regarding technology are manifested. Although one cannot reach a conclusion based on the developing information available, and one must always be wary of generalizations, a first reaction is that women's use of technology may be evolving in a manner that will make them more effective than men as technology mediated dispute resolvers. The middle school study cited above concludes that while in the past males were in synch with number crunching computers, more complex and multi-functional computers have opened the door to a differently gendered use.[43]

C. *Does Race or Income Matter?*

While there is a significant difference between racial and ethnic groups regarding older children and Internet access,[44] at least one survey reports no

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[41] *Id.*

[42] This study describes boys' computer usage in limited and, frankly, unsettling terms. Other studies indicate that boys also rely on the Internet to overcome their social discomfort and talk with girls. While female teens generally talk with other females and only occasionally converse with boys, boys often use the Internet to communicate with girls. *See* Boneva, *infra* note 84, at 649 and accompanying text. For a study that reveals a less pessimistic and critical picture of how boys interact online, and that also analyzes the gender differences that children manifest in their online interactions, see Sandra L. Calvert, Brian A. Mahler, Sean M. Zehnder, Abby Jenkins & Mickey S. Lee, *Gender Differences in Preadolescent Children's Online Interactions: Symbolic Modes of Self-Preservation and Self-Expression*, 24 J. APPLIED DEV'L PSYCH. 627, 641–42 (2003), http://cdmc.georgetown.edu/papers/gender_differences_in_preadolescent_ children.pdf.

[43] Christie, *supra* note 37, at 2. The specific issue about females' orientation towards computers and other technologies raises the question of how that orientation will affect their behavior in technology mediated dispute resolution. That question then ties into a more general discussion that, until now, has focused primarily on offline behavior and addressed whether gender differences are reflected in the way that men and women resolve disputes. *See* DEBORAH M. KOLB & JUDITH WILLIAMS, THE SHADOW NEGOTIATION: HOW WOMEN CAN MASTER THE HIDDEN AGENDAS THAT DETERMINE BARGAINING SUCCESS (2000) (examining hidden agendas and masked assumptions in the negotiation). Kolb and Williams, for instance, have a section specifically titled, "What Does Gender Have to Do with Negotiation?" *Id.* at 23–31.

[44] For children between the ages of 13 and 17, 69% of the Caucasian, 59% of the

statistical difference concerning Internet access for preschool children between the ages of two and five. Grunwald Associates and the Corporation for Public Broadcasting report that 23% of Caucasian, 23% of Hispanic, and 21% of African-American children two to five years old have Internet access at home.[45]

Although those percentages might seem low, the percentages of children with Internet access at home get larger as the children get older. The percentage of older children with Internet access at home was more than three times greater than the percentage of two- to five-year-olds that have Internet access, at least for Caucasians.[46] While the two- to five-year-old Internet access numbers may not signal a closing of the digital divide for different ethnic and racial groups, these statistics suggest that similar percentages of very young children are being exposed to the Internet regardless of ethnicity and race.

Although racial and ethnic differences concerning Internet access are more pronounced as children grow older,[47] very young children of all racial or ethnic groups are learning to use technology at the same time they are learning to drink without a sippy cup. And perhaps contrary to popular assumptions, Caucasians are not always the most frequent users of online communication technology. English-speaking Hispanics have reported using IM at a rate almost one and a half times the rate of Blacks and Whites.[48]

If the focus of one's study is changed, however, then digital divides become readily apparent. If one looks at family incomes independent of the child's gender, race, ethnicity, and the mother's marital status and education, for example, then a division will be seen.[49] When we change our focus from young children to adolescents who are 10 to 14 years old, we see that poor

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Hispanic, and 37% of the African-American children have access to the Internet at home. CONNECTED TO THE FUTURE, *supra* note 35, at 5.

[45] *Id.*

[46] *Id.*

[47] Based on a survey of 2,204 adults, for example, The Pew Internet and American Life Project reports that although 64% and 63% of Whites and Hispanics (English speaking) use the Internet, respectively, the number drops to 46% for Blacks. MADDEN, *supra* note 24, at 3. By August 2003, however, 51% of surveyed African Americans reported that they were using the Internet. *Id.* at 5. A household income exceeding $50,000 per year and a high level of education are strong predictors of Internet use. *Id.* at 7.

[48] *Id.* 11–12. In the summer of 2002, 64% of English-speaking Hispanic online users reported using IM compared to 46% of Blacks and Whites.

[49] *See* Mary Keegan Eamon, *Digital Divide in Computer Access and Use Between Poor and Non-Poor Youth*, 31 J. SOC. & SOC. WELFARE 91, 107 (2004).

youth are only about one-third (.36) as likely to have a computer in the home as compared to adolescents who live in households with more income.[50]

And if one continues to focus only on access to the Internet at home, as distinguished from access to the Internet at any location (including schools), one will find that as recently as four years ago 77% of Caucasian children of all ages had computers in their homes compared to 43% of African-American children and 37% of Latino children.[51] These disparities must not be ignored as technology mediated communication becomes an increasingly central component of our lives.

IV. WHAT ARE YOUR CHILDREN DOING?

In early fall, 2003, American Online and Digital Marketing Services, Inc. conducted an online survey of 2000 children between seven and twelve years of age. The survey reports that approximately one-half (46%) of those children connect to the Internet at least four times a week.[52] The AOL/DMS survey concludes that the Internet is central to the daily lives of children seven to twelve years old. More than half of the children surveyed spend time using e-mail to stay in contact with their friends. And notable for its dispute resolution implications, children are establishing an identity and personality online. Twenty percent of those responding, for instance, use buddy icons to better define themselves online.[53] In fact, one can choose from literally thousands of icons or create new icons, which will allow for even greater creativity and expression online.[54]

Children are using computers to connect with each other and they are creating their own online communities. Kidfu[55] is recognized as a safe online children's community for meeting old and new friends.[56] Children can chat, exchange notes with NotePasser (allows children to pass notes one on one,

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[50] *Id.*

[51] Sandra L. Calvert, Victoria J. Rideout, Jennifer L. Woolard, Rachel F. Barr & Gabrielle A. Strouse, *Age, Ethnicity, and Socioeconomic Patterns in Early Computer Use*, 48 AM. BEHAV. SCIENTIST 590, 593 (January 2005).

[52] *Id.*

[53] *Id.*

[54] *See, e.g.*, AIM Buddy Icons, http://www.imbuddy.net/ or http://www.ballericons.com/ (last visited Feb. 18, 2006).

[55] *See, e.g.*, Kidfu, http://www.kidfu.com/ (last visited May 19, 2005).

[56] *See* Net Family News, Online-Safety Resources for Home and School, http://www.netfamilynews.org/resourcesnew0211.htm (last visited Feb. 18, 2006).

"like passing a real note in class, but without driving your teacher nuts"),[57] post to bulletin boards, play games, submit stories for publication in the online magazine, and even serve as deputies to assist in keeping the chats safe.

International communities have been created by children themselves. Those communities include, among many others, the Australian websites Matmice,[58] which was started by three teenage sisters and offers children free homepages, and Kidszom,[59] created by a sixteen-year-old for entertainment and for teaching drawing and animation.[60]

The Cable and Childnet Wireless Academy[61] recognizes childrens' innovative web projects. In 2005, the Academy reviewed entries from at least forty-nine different countries.[62] The winners included Looking At You,[63] created by a Scottish fourteen-year-old and two of her classmates at the Royal Blind School in Edinburgh, which shares how individuals who are blind can enjoy life, engage in sports, and even create their own websites.[64] The website encourages all children to contribute to the site. Me Against Terrorism[65] was established by four students from Uzbekistan who wanted to inform young people at their school about terrorism who then discovered that children from around the world shared similar feelings.[66] Obviously, the children are comfortable using technology to explore even the most serious issues.

The Academy also sponsors projects. For 2005, the projects it is supporting include "It's all in the mix,"[67] a website started by students at Northern Ireland's first religiously integrated school that shares experiences

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[57] *See* Kidfu, *supra* note 55.

[58] Matmice, http://www.matmice.com/ (last visited Feb. 18, 2006).

[59] Kidzdom, http://www.kidzdom.com/flash5.html (last visited Feb. 18, 2006).

[60] *See id.*

[61] Childnet Wireless Academy, http://www.childnetacademy.org/default.aspx (last visited Feb. 18, 2006).

[62] Cable & Wireless Childnet Academy Winners 2005, http://www.childnetacademy.org/winners (last visited Feb. 18, 2006) [hereinafter Winners].

[63] Looking At You, http://www.sonokids.org/lookingatyou/ (last visited Feb. 18, 2006).

[64] *Id.*

[65] Me Against Terrorism, http://termez11.connect.uz/mat/project.html (last visited Feb. 18, 2006).

[66] *See* Winners, *supra* note 62.

[67] *Id.*

and invites others to comment about "mixing" in a divided community.[68] The Academy also is supporting "What Will You Do?,"[69] a website created by a sixteen-year-old Canadian to provide young people with a place to share their stores about teen pregnancy and find information and support.[70]

The Junior Summit program, an Internet-based democratic global learning program, brought more than 3,000 10 to 16 year old children together from 139 different countries.[71] Junior Summit attempted to allow children from around the world to tell their stories, describe their perception of the world, and define their identities.[72] In order to provide equal access, the web site was designed to conform to the lowest common denominator in terms of technology.[73]

One group of Junior Summit participants decided to work on the issue of "bringing about peace" and, almost immediately, a heated debated developed between an Israeli and a Palestinian child.[74] Other children in the group quickly joined the discussion and one child suggested that the group focus on present and future concerns, not past histories, which turned out to be a very helpful suggestion.[75]

Although there were adult moderators, the moderators restrained themselves and let the children find their own voices in the "bringing about peace" group. The children were able to resolve conflict online without adult assistance, learn to listen, believe they had control of that online environment, and use their voices to prevent harm and avoid escalation.[76]

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[68] *See* Winners, *supra* note 62.

[69] What Will You Do?, http://www.ucdsb.on.ca/athens/teenpregnancy/ (last visited Feb. 18, 2006).

[70] *See* Winners, *supra* note 62.

[71] Justine Cassell, *"We Have These Rules Inside": The Effects of Exercising Voice in a Children's Online Forum*, *in* CHILDREN IN THE DIGITAL AGE: INFLUENCES OF ELECTRONIC MEDIA ON DEVELOPMENT 4 (S. Calvert, A. Jordan & R. Cocking eds., 2002), http://www.media.mit.edu/gnl/pubs/jrsummit.chap.cassell.01.pdf. The author describes the community as democratic because the children chose topics, organized workgroups, elected representatives, and decided outcomes. The author was the hands-on developer of Junior Summit.

[72] *Id.*

[73] *Id.*

[74] *Id.* at 10–11.

[75] *Id.* at 11.

[76] *Id.* All messages in Chinese, English, French, Portuguese, and Spanish were automatically translated and a multi-lingual simultaneous chat system was created. The automatic translation system did not work perfectly, however, and English speakers became the most frequent contributors. *Id.* at 15–16.

This group turned out to be one of the most productive when it came to suggestions for concrete action, communicated more frequently, and worked together longer than many other groups.[77] As long as three years after the summit officially ended in 1998,[78] a teacher in Spain reported that her Junior Summit student participants:

> feel empowered to act as leaders, as world-wide ambassadors of digital culture. They regard school with new eyes, as a GLOBAL place where people may meet people easily, where they can learn and voice their opinions about the world that surrounds them. A place where they may feel loved, heard, taken into consideration where technology is (for the first time) a powerful tool that they employ better than adults.[79]

These websites are just a small sampling of the types of communities that children are creating online. At least in some cases, children will find their most trusted information, most reliable emotional support, and greatest understanding in virtual spaces. When the serious problems described above are being addressed on children's websites, be assured that children will resolve disputes using technology mediated communication as they move into adulthood. To be more precise, be assured that they will continue to rely upon technology mediated communication.

Individuals are comfortable accessing the Internet from remote locations that are not their home or their workplace. The frequency with which this occurs for adults increases as the ages decline. Although these statistics do not address children, it still is noteworthy that almost one-half (48%) of individuals 18 to 24 years old report that they have logged on to the Internet from a remote location.[80]

And children are not only communicating online. A later subsection will focus on mobile wireless telephones, but at this point we can note that although preschoolers may not frequently be using mobile wireless telephones, mobile phones are *de rigueur* for many junior high schoolers and some grade school aged children. We are approaching the day when, because

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[77] *Id.* at 11.

[78] *Id.* at 23. In fact, participants refused to let Junior Summit end and were still communicating with each other three years later.

[79] *Id.* at 22.

[80] Paul Harwood, People Who Use the Internet Away From Home and Work (March 2004), http://www.pewinternet.org/pdfs/PIP_Other_Places.pdf, at 3. This report states that if the third location is school and that location is taken out of the analysis, then the largest group that accesses the Internet from remote locations consists of 25- to 34-year-olds (26% of those who go online from remote locations). *Id.*

mobile phone ownership is universal, and because the phones are being used constantly, anyone without a phone essentially will be a non-person.[81]

The mobile phone, with its video, audio, and text capabilities, is changing the way that children communicate and behave. Because wireless phones allow children to be available on demand, users are learning that plans often do not have to be firm. One can wait until the last minute to see what possibilities are presented and only then make commitments.

And users believe that they can talk about anything on their phones. A study that examined how adolescents use technology for health information concluded that adolescents consider essentially all topics, including personal health issues, appropriate for cell phones.[82] The phones are a desired means of conversation because, among other attributes, the users believe they provide privacy.[83] They trust the technology, even at times when we (adults) believe that trust may be ill-advised.

Researchers at Carnegie Mellon University believe that adolescents have embraced technologies such as instant messaging because, during this developmental period, there is a powerful need for numerous friendships and peer groups, thus making adolescents the "ultimate communicators."[84] Peer communication complements private reflection and these social and personal processes together permit adolescents to both understand their experiences and create functioning relationships between themselves and society.[85] Yet this leaves us with a question: will this reliance on technology continue as children become adults?

Communications to form and maintain individual friendships, and communications that allow one to connect with, or create new, groups serve

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[81] *See* Thurlow, *supra* note 12, at 1 (citing www.orange.com).

[82] Harvey Skinner et al., *How Adolescents Use Technology for Health Information: Implications for Health Professionals from Focus Group Studies*, 5 J. MED. INTERNET RES. e32 (2003), http://www.jmir.org/2003/4/e32/.

[83] *Id.*

[84] Bonka S. Boneva et al., *Teenage Communication in the Instant Messaging Era, in* DOMESTICATING INFORMATION TECHNOLOGY (Robert Kraut et al. eds., forthcoming Mar. 2006) (manuscript at 614, *available at* http://www-2.cs.cmu.edu/~kraut/RKraut.site.files/articles/Boneva04-TeenCommunicationInIMEra.pdf (last visited Feb. 18, 2006)). In an effort to create a representative national sample, the researchers collected data by random digital dialing of residential telephone exchanges. *Id.* at 626.

[85] *Id.* at 616, (citing G.J. McCall, *The Self-Concept and Interpersonal Communication, in* INTERPERSONAL PROCESSES: NEW DIRECTIONS IN COMMUNICATION RESEARCH 63–76 (M.E. Roloff & G.R. Miller eds., 1987); J. Youniss & M. Yates, *Adolescents Public Discussion and Collective Identity, in* COMMUNICATION: AN ARENA OF DEVELOPMENT 215–33 (N. Budwig, I.C. Uzgiris & J.V. Wertsch eds., 2000)).

different purposes in adolescent development and are supported by different technologies.[86] As adolescents evolve from a parent-defined to a peer-defined identity, they form as many friendships as possible and develop their identity through social interaction.[87] Yet this can prove difficult because adolescents often do not have sufficient independence to move about freely and meet with their friends after school.[88] This is where technology steps in.

Face-to-face communication is restricted at the precise time when adolescents have a particularly strong need for such contact.[89] Because Instant Messaging (IM) allows users to communicate with both individuals and groups, and because a user can send essentially an unlimited number of messages once he or she is connected to the Internet, it is not surprising that adolescents rely heavily on Instant Messaging.

There is evidence that one's age affects how frequently one uses Instant Messaging.[90] As children in their teens grow older and their identities become better defined, the need for constant peer comparisons declines.

If the need to stay connected is purely an extension of adolescent growth and angst, then admittedly, the author's thesis is constructed on rather shaky ground. But when one focuses on nations that embraced mobile communications more quickly and thoroughly than the United States, then one will see young adults relying heavily upon technology mediated communications. And it is difficult to believe that individuals who have become comfortable and highly skilled in technology mediated communications will suddenly abandon those skills upon reaching adulthood.

The Carnegie Mellon study asserts that, controlling for age, income, gender, and geographic proximity, teenage IM users were not as psychologically close as partners who spoke on the phone or visited each other.[91] But teenagers did report that they received emotional support, advice, exchanged favors, shared common interests, and spent time together as frequently with Instant Messaging partners as they did with their telephone and visitation contacts.[92]

Although Instant Messaging conversations often started with small talk, Instant Messaging partners often spontaneously shared personal information

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[86] Boneva et al., *supra* note 84, at 616.

[87] *Id.* at 617.

[88] *Id.* at 619.

[89] *Id.*

[90] *Id.* at 621.

[91] *Id.* at 638.

[92] *Id.* at 639.

and sought or provided emotional advice.[93] In fact, Instant Messaging, voice communications, and face-to-face visits generated supportive conversations with the same frequency.[94] There are numerous opportunities for sharing personal information when one is Instant Messaging. Teenage IM users stated that they typically conducted from two to sixteen simultaneous conversations.[95]

The teenagers reported that they liked having multiple, simultaneous, person-to-person conversations. While they enjoyed the privacy of a one-to-one conversation, they also apparently wanted to stay connected to a larger group.[96] The ability to establish a presence through open windows or by leaving away messages (which will be discussed more specifically in the next section) creates a sense of group participation.[97] Yet another study discussed in the following section notes that the ability to forward messages, combined with the fact that messages can be sent to many people simultaneously, increases social connectivity.[98]

Instant Messaging assists in creating a social identity and a sense of security. By merely adding someone's name to a buddy list, a user can unilaterally build a social network.[99] Additionally, Instant Messaging serves a communicative function by providing a simple inexpensive way to talk with one's friends. As teens grow older and feel more secure, constant reaffirmation may no longer be necessary. But if technology mediated communication played a significant part in shaping their identities, young adults will not ignore that medium.

V. TECHNOLOGY MEDIATED COMMUNICATION CAN CREATE INTIMACY AND MAINTAIN RELATIONSHIPS

It may seem impossible to resolve at least some types of disputes using technology. For instance, how can one ever find the high level of trust necessary to reveal his or her most intimate interests and vulnerabilities?

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[93] *Id.* at 641.

[94] *Id.* at 643.

[95] *Id.* Teens described instant messaging conversations as less enjoyable than phone or face-to-face communications. *Id.* at 650–51. This may have to do with the fact that, with multiple conversations proceeding simultaneously, they may not be sufficiently focused on any one conversation to find it enjoyable. *Id.* at 651.

[96] *Id.* at 644.

[97] *Id.* at 645.

[98] *See* Boase & Wellman, *supra* note 10.

[99] *See* Boneva et al., *supra* note 84, at 652.

How can we trust someone when we cannot scrutinize his or her face, when we cannot search for the slightest flinch and cannot see whether another's eyes are averted?

As surprising as it may seem, it is possible to create a trustworthy environment through technology mediated communication. Consider e-mail: e-mail messages can be saved and forwarded, for example. If one is inclined towards prevarication, then he or she should be reminded that messages can be saved and forwarded to the sender's friends, families, colleagues and employer. College students' conversations conducted by telephone, face-to-face, and by e-mail/Instant Messaging reveal that the students lied most frequently during telephone conversations, which are synchronous, do not leave a record, and occur when the parties are not in the same place.[100] Face-to-face conversations, which also are synchronous, recordless, and do engage the parties in the same location, produced the second most lies.[101] E-mail, which is asynchronous, does create a record, and does not place the parties in the same location, resulted in the least deception.[102]

Although Social Distance Hypothesis asserts that deceivers will use less-rich media when lying because that medium reduces discomfort, there is some evidence to the contrary. If the objective is to reduce deception during interactions, then perhaps one should actually seek an asynchronous and recordable communication medium.[103]

Researchers have questioned whether information technology allows users to offer signs of availability and affection that are necessary to affective relationships.[104] But developments like buddy lists and away messaging illustrate that technology is being used to indicate availability and

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[100] *See* Jeff Hancock, Jennifer Thom-Santelli & Thompson Ritchie, *We Are More Likely to Lie Over the Phone than in an Email*, ONLINE OPINION, July 13, 2004, http://www.onlineopinion.com.au/view.asp?article=2363.

[101] *Id.*

[102] *Id.*

[103] *Id.* It certainly is not necessary for parties to be in different locations in order to use e-mail and instant messaging. Psychologists suggest that sending e-mail messages to other family members at times when everyone is at home, for example, can help to break down communication barriers. *See* Jon Schwartz, *That Parent-Child Conversation is Becoming Instant and Online*, N.Y. TIMES, Jan. 3, 2004, at A1, *available at* http://query.nytimes.com/gst/abstract.html?res=F30916FD3C550C708CDDA80894DC404482.

[104] *See* Walther, *supra* note 17, at 392 (citing B. A. Nardi & S. Whittaker, *The Place of Communication*, *in* DISTRIBUTED WORK 83–112 (P.J. Hinds & S. Keisler eds., 2002).

attention.[105] Technological accessibility literally may change what it means to be close to another person.[106]

A 2005 study by Professors Walther, Loh, and Granka was undertaken to determine the degree to which online communications can reveal emotions instructed participants to express greater or less affinity in both face-to-face and synchronous online chats.[107] The goal was to compare the level of affect achieved online and offline as well as the specific behaviors responsible.[108] In the introduction to the study, two dominant schools of thought are identified.[109] One viewpoint argues that online communications are less social, relational, understandable, and ultimately effective because nonverbal vocal and physical cues are lacking.[110] The other position maintains that individuals adapt to different mediums and can glean information about another person by inserting and interpreting stylistic and contextual cues.[111]

A "cues filtered out" approach concludes that because nonverbal cues that transmit relational information, such as voice quality, vocal inflections, facial expressions, physical appearance, and physical movements, are not available in CMC, CMC users are limited in their ability to exchange impressions and emotions.[112] But research supports the view that individuals can adapt to environments that do not provide nonverbal cues, which the 2005 study identified above presents as social information processing theory

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[105] *Id.*; *see infra* notes 156–69 and accompanying text.

[106] *See* Walther, *supra* note 17, at 392–93.

[107] Joseph B. Walther, Tracy Loh & Laura Granka, *Let Me Count the Ways: The Interchange of Verbal and Nonverbal Cues in Computer-Mediated and Face-to-Face Affinity*, 24 J. LANGUAGE & SOC. PSYCH. 36, 36 (2005).

[108] *Id.* at 37.

[109] *Id.* at 36–37; *see also supra* notes 19–21.

[110] Walther et al., *supra* note 107, at 37–39.

[111] *Id.*

[112] *Id.* at 38 (citing J. SHORT, E. WILLIAMS & B. CHRISTIE, THE SOCIAL PSYCHOLOGY OF COMMUNICATION (1976); M.J.Culnan & M.L. Markus, *Information Technologies, in* HANDBOOK OF ORGANIZATIONAL COMMUNICATION: AN INTERDISCIPLINARY PERSPECTIVE 420–43, (Frederic M. Jablin et al. eds.,1987)); Jonathon N. Cummings, Brian Butler & Robert Kraut, *The Quality of Online Social Relationships*, COMM. ACM, July 2002, at 103, 103–08. A more detailed list of verbal cues would include smiling, moving closer, increased gazing into another's eyes, direct body orientation, forward lean, touch, open posture, facial orientation, head nods, gestures, facial animation, the loudness of one's voice, faster speech, varied pitch or tempo, laughter, and fewer silences. *See infra* note 122.

(SIP).[113] SIP rejects the view that CMC is inherently impersonal and instead argues that the verbal characteristics of CMC can be used to convey relational information that otherwise would be communicated through nonverbal cues.[114]

One particular cue that has attracted attention is "immediacy." Immediacy is defined as a combination of involvement, affection and warmth: the emotional expression of one individual towards another.[115] Nonverbal cues such as proximity, smiling, eye contact, body orientation, and postural lean have been studied as to their relation to immediacy.[116] Equilibrium theory suggests that communicators dynamically adjust these behaviors and that one person's action will prompt a response to maintain, increase, or decrease the intimacy level.[117] Early research about teleconferencing suggested that language can compensate for missing nonverbal cues, observing that statements like "I agree" can be substituted for the nod of one's head.[118] The Nardi study hypothesizes that "[i]mmediacy and affection are affected more by communicators' social motivations than by computer-mediated or face-to-face channels."[119]

Researchers readily acknowledge that measurement is difficult. For instance, when one describes a sibling to a friend, any measure of verbal immediacy may reflect feelings about the sibling rather than feelings about the friend. In contrast, nonverbal immediacy expressed through actions such as touching and posture is more indicative of the speaker's feelings toward the person with whom he or she is speaking.[120]

Strategies for validating and invalidating one's sense of worth were identified.[121] In total, the study codes 125 separate variables for the expression of affinity.[122]

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[113] Walther et al., *supra* note 107, at 37, 39–40, (citing twelve different studies examining online communications in environments that include workplaces, bulletin boards, chats, virtual reality systems, and instructional Internet sites).

[114] *Id.* at 40.

[115] *Id.* at 41.

[116] *Id.*; JUDEE K. BURGOON, DAVID B. BULLER & W. GILL WOODALL, NONVERBAL COMMUNICATION: THE UNSPOKEN DIALOGUE (2d ed., 1996); Judee K. Burgoon & J.L. Hale, *Nonverbal Expectancy Violations: Model Elaboration and Application to Immediacy Behaviors*, 55 COMM. MONOGRAPHS 58, 58–59 (1988).

[117] Walther et al., *supra* note 107, at 41.

[118] *Id.* at 42.

[119] *Id.*

[120] *Id.* at 45.

[121] Invalidation strategies include, for instance, indifferent responses (denying existence or relation), impervious responses (denying others' own experiences), and

disqualifying responses (denying others' significance). These strategies can be implemented through a variety of actions including impersonal language, monologue, irrelevant responses, and minimally relevant responses. Validation strategies include responses that acknowledge another person's feelings as true and accurate. The study also considered how communication partners managed their conversations as a reflection of affinity. Positive feelings about the person with whom one is communicating are reflected by the way one expresses agreement or disagreement. *Id.* at 45–46. Actions that indicate lower to higher levels of affinity are indicated by aggravated disagreement, direct disagreement, indirect disagreement, indirect plus modest viability, praise plus indirect disagreement, praise plus provisional agreement, implicit or direct agreement, and strong agreement. *Id.* at 46 (citing D.R. Scheerhorn, *Politeness in Decision-Making*, 25 RES. ON LANGUAGE & SOC. INTERACTION 253, 263, (1991–1992)). The study also recognized five forms of agreement and disagreement: confirmation, disagreement, accedence, repudiation, and disconfirmation. Accommodation behaviors were considered that include open, closed, and rhetorical questions. *Id.* at 47.

[122] *Id.* at 59–60. The researchers studied nonverbal cues in great detail, coding the following variables for expression of affinity:

> Kinesics: body orientation to partner (indirect/direct), facial orientation to partner (indirect/direct), gaze (averted/direct), gesture frequency (none/frequent), gesture activity (passive/active), facial pleasantness (unpleasant/pleasant), facial animation (passive/active), smiling (none/frequent), facial concern (indifferent/concerned), nodding (none/frequent), laughing (none/frequent), leg and foot movement (none/frequent), rocking and twisting (none/frequent), random head movement (none/frequent), composure (nervous/cool), facial tension (tense/relaxed), rigidity (rigid/loose), body straightness (erect/slumped), body involvement (uninvolved/involved), interest (uninterested/interested), openness (closed/open), activity (passive/active), body lean (backward/forward), warmth (cold/warm), head shaking side-to-side (none/frequent), self-touch (none/frequent), object touch (none/frequent), touch partner (none/frequent), random arm movements (none/frequent), coordinated movement (uncoordinated/coordinated), body relaxation (tense/relaxed), hand/arm relaxation (tense/relaxed), looked at ground/feet (none/frequent), looked around room (none/frequent), folded arms (none/frequent), moved farther or closer (farther/closer), rolled eyes (none/frequent), tapped table;
>
> Vocalics: loudness (soft/loud), sharpness (mellow/sharp), rate/tempo (slow/fast), pitch variety (monotone/varied), articulation (unclear/clear), fluency (nonfluent/fluent), rhythm (jerky/rhythmic), happiness (unhappy/happy), warmth (cold/warm), pleasantness (pleasant/unpleasant), laughing (none/frequent), pitch (low/high), timbre (whiny/resonant), pausing (none/frequent), tension (tense/relaxed), vocal expressiveness (flat/expressive), receptivity (closed/receptive), concern (apathetic/concerned), patience (impatient/patient), dominance (submissive/dominant), cooperativeness (competitive/cooperative), condescension (sincere/condescending), interruptions (waited/interrupted), attentiveness (distant/attentive), silences between speakers (none/frequent), pauses during speech (none/frequent), turn duration (very short/very long), proportion of talking by target person (0%-100%);

The results indicate that the amount of subjectively experienced affinity, measured in terms of immediacy and affectionate communication, does not vary significantly depending upon whether communication is CMC or face-to-face.[123] On the specific subject of affinity, the study concludes that affinity issues may be translatable among cue systems.[124] Whether communication is by phone, or text, or face-to-face is not determinative. Even minimally motivated individuals can effectively adapt their affective intentions into text.[125]

Needless to say, this conclusion is not universally accepted. But the declaration is a powerful one. If individuals can effectively communicate their emotions through different mediums, then this opens up tremendous opportunities for technology mediated dispute resolution

One must always be cognizant of potential problems, however. Society is moving from spatially proximate to more dispersed and less tightly knit communities.[126] Although technology mediated communication can assist in bridging those distances, there are dangers. The speed at which individuals can interact, combined with an ignorance of, or unwillingness to

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> Verbal (all coded as none to frequent): irreverent response, monologue, denigrate idea, change subject, insult, challenge credibility, challenge facts of statement, express doubt, profanity, brief disqualification, sarcasm, reinterpretation of feelings, personal language, praise idea, praise ability, praise attribute, express enjoyment/misery, ask for personal information, offer personal information, use of humor, asks for opinion, extreme positive language, extreme negative language, explicit positive affection, explicit personal praise, explicit negative affect, explicit negative condemnation, outright disagreement, direct disagreement, indirect disagreement, indirect disagreement + modest viability, repudiation, accedence, simple agreement, direct agreement, strong agreement, monosyllabic affirmation, praise + indirect disagreement, praise + provisional acceptance, praise/acknowledge + novel proposition, closed-ended questions, open-ended questions, ambiguity, asked questions, made assertions, offered encouragement, tone toward topic, self-praise, self-denigration, discuss personal similarities, rhetorical questions, contradiction, apathy, sarcasm, refuses to answer, seeks future contact;
>
> Emoticons (coded for frequencies of appearance): :), ;), :(.

Id.

[123] *Id.* at 57.

[124] *Id.* at 58.

[125] *Id.*

[126] Boase & Wellman, *supra* note 10 (asserting, however, that Internet communication is being used in response to, and was not the cause of, spatially dispersed relations).

acknowledge, the cues that are available may lead to regrettable messages being exchanged.[127]

Yet one still can make a strong case that interpersonal relationships can be created through text that are as intimate and trusting as those created face-to-face. Relying on the nonverbal cues that are available online, certain individuals may feel more secure and confident communicating through text. Some people may feel more comfortable relying on typographic and chronemic cues, for example, as well as content and linguistic strategies.[128]

Intimacy can be achieved on the Internet. Online communications may, in fact, be more intimate than offline exchanges. Computer-mediated communications can even be "hyperpersonal." Even though impressions may not be as wide reaching, those impressions may be particularly intense.[129]

One way intimacy can be achieved online is through the use of uncertainty reduction strategies. If one asks direct questions and volunteers information (which encourages reciprocal disclosures) more frequently than would be typical in a face-to-face conversation, then an online conversation may become very personal and revealing. The visual anonymity that exists online and the feeling that individuals are communicating in a protected, private space (which may or may not be warranted), can lead to disclosures that exceed those that would occur in a face-to-face meeting.[130]

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[127] *Id.*

[128] *See, e.g.*, Lisa C. Tidwell & Joseph B. Walther, *Computer-Mediated Communication Effects on Disclosure, Impressions, and Interpersonal* Evaluations, 28 HUM. COMM. RES. 317, 318–19 (2002) (citing Sara Kiesler, *The Hidden Messages in Computer Networks*, HARV. BUS. REV., Jan.–Feb. 1986, at 46–54, 58–60; Sara Kiesler, Jane Siegel & Timothy McGuire, *Social Psychological Aspects of Computer-Mediated Communication* 39 AM. PSYCHOLOGIST 1123, 1126 (1984); Joseph B. Walther, *Impression Development in Computer-Mediated Interaction*, WESTERN J. COMM. 57, 381–98 (1993); Joseph B. Walther & Judee K. Burgoon, *Relational Communication in Computer-Mediated Interaction*, 19 HUM. COMM. RES. 50, 50–58 (1992)).

[129] *See, e.g.*, Jeffrey T. Hancock & Philip J. Dunham, *Impression Formation in Computer-Mediated Communication Revisited: An Analysis of the Breadth and Intensity of Impressions*, 28 COMM. RES. 325, 325–47 (2001); Joseph B. Walther, *Group and Interpersonal Effects in International Computer-Mediated Collaboration*, 23 HUM. COMM. RES. 342, 350 (1997).

Additionally, according to social identity and de-individuation theory, the absence of nonverbal cues in computer-mediated communication causes parties to form impressions based on social categories rather than interpersonal cues. *See* ABA E-Commerce and ADR Task Force Report, *supra* note 4.

[130] The "disinhibition effect" can be powerful in cyberspace. Psychological barriers are reduced for a variety of reasons. For example, parties engaged in computer-mediated communication may be more open because no one can see them (invisibility);

Instant Messaging, e-mail, and other telecommunication strategies are increasingly being utilized to maintain relationships over significant distances.[131] For instance, when a student graduates from high school and leaves home to study at college, it is not unusual for the friendships formed in high school to weaken and perhaps even end. When students are physically separated it becomes more difficult to communicate. Time and energy that could have been devoted to preserving old friendships now will be spent forming new friendships.[132]

According to a recent study that followed one thousand students (two groups of five hundred high school students accepted to Carnegie Mellon University in the spring of 2000 and the spring of 2001), telephones, e-mail and instant messaging can help to maintain relationships when students leave their homes to attend college.[133] These communication technologies, however, are not equally effective. The technologies differ as to the social presence created, the amounts of information that can be transferred, the cost, and the particular characteristics of each technology that can influence the content of the communication itself.[134]

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asynchronicity (not having to deal with immediate reactions); "solipsistic introjection" (absence of face-to-face cues combined with online text communication may create the feeling that the online message is a voice originating within [or "introjected" into] one's own psyche); disassociation (these communications are merely a game); and a neutralization of status ("I'm equal to him or her"). *See* JOHN SULER, *The Online Disinhibition Effect*, *in* THE PSYCHOLOGY OF CYBERSPACE, http://www.rider.edu/users/suler/psycyber/disinhibit.html (last visited Feb. 18, 2006).

[131] Jonathon N. Cummings, John B. Lee & Robert Kraut, *Communication Technology and Friendship during the Transition from High School to College*, *in* DOMESTICATING INFORMATION TECHNOLOGY (Robert Kraut et al. eds, forthcoming Mar. 2006) (manuscript at 810, *available at* http://www.cs.cmu.edu/~kraut/RKraut.site.files/articles/Cummings04-TechnologyAndFriendship.pdf (last visited Feb. 18, 2006)).

[132] *Id.* at 813.

[133] *See id.* at 821, 837.

[134] *Id.* at 815. Data was collected during the students' senior year in high school, the end of their first college semester, the end of their freshman year, the end of their sophomore year and, for the students accepted in the year 2000, their junior year. *Id.* at 821. In an effort to avoid collecting information only about one type of relationship, the researchers asked the students to separate their relationships with others into five different groups: individuals who provide practical assistance; individuals with whom they discuss hobbies, sports, and part-time activities; individuals with whom they socialize; people from whom they seek advice about important issues; and individuals who are in the same organizations. *Id.* at 822. The researchers then randomly selected a subset of those relationships, which were balanced by gender, and included both high school relationships and college relationships. *Id.* at 833.

The study attempted to determine whether telecommunication technologies could influence the negative effects that distance and time can have on relationships. The conclusions are surprising. E-mailing and instant messaging slowed the predictable decline in closeness between friends, even when face-to-face and telephone communications did not.[135] Contrary to expectations, the relative media richness and sense of physical presence that telephone communications can provide did not result in telephone conversations being the most effective way to preserve relationships.[136]

So to ask the obvious, why are e-mail and instant messaging more effective at preserving relationships than telephone communications? One possibility is that it costs much less to connect with far away friends via e-mail and instant messaging than by using the telephone. This advantage obviously is not a reflection of the inherently superior communication properties of e-mail and instant messaging. Instead, it is the result of government regulation and pricing strategies.[137]

A comparatively low cost communication medium can be used frequently without hesitation. In fact, the researchers cited above conclude that the key to preserving relationships is not the ability to create a sense of closeness with any communication, but instead the key is the frequency of the communication. In other words, communication frequency, rather than quality, preserves relationships.[138]

If one key to preserving relationships is frequent communication, then a generation that is always available and accessible has additional pathways for building relationships that our current dispute resolvers have not fully integrated into their dispute resolution practices. Many of us feel that it is not necessary to be available and accessible all the time. Frankly, for us it is not our normal way of operating and we do not welcome the thought. Consequently, the possibility of communicating any time, any place, through

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[135] *Id.* at 834.

[136] *Id.* A related preliminary study argues that technologies like the Internet and mobile phones can reduce the damage caused to social relationships and the stress created when one physically moves away to a new residence. Preliminary results suggest that communication technologies provide the moving parties with greater perceived emotional support and allow the movers to retain social connections. The researchers note, however, that the ability to retain ties may adversely affect the moving parties' willingness and ability to establish social connections in the new location. Irina Shklovski, Robert Kraut & Jonathon Cummings, *Residential Mobility, Technology Use and Social Ties*, http://conferences.aoir.org/viewabstract.php?id=263&cf=3 (last visited Feb. 18, 2006).

[137] *See infra* note 179.

[138] Cummings et al., *supra* note 131, at 835.

any available medium, is not structurally factored into the approaches and processes that most current dispute resolvers use to address problems.

The next generation, however, perceives constant availability and accessibility as the norm. It is both an advantage and a necessity. Frequent communication represents not an inescapable and unwelcome intrusion, but rather a way to build stronger relationships more quickly. If that is how someone has learned to create and strengthen relationships in his or her personal life, then that is one way he or she will want to communicate as a party to a dispute resolution process. It also is one way that he or she will try to build relationships when acting in the role of a dispute resolver.

A. *Technology Knows No Borders*

Japanese urban culture has integrated portable technology to a greater extent than United States culture. One explanation for this phenomenon is that society, culture and technology have an organic relationship and that technologies objectify particular cultures.[139] Subsets of the Japanese population, particularly young women, have been using mobile communication media for more than a decade and by 1996, 48.8% of Tokyo middle and high school students were carrying pagers.[140] Eager to capture that market, mobile phone providers introduced inexpensive short text messaging service for mobile handsets that soon evolved into a mobile internet based service.[141]

Public spaces in Tokyo are highly regulated, especially public transportation. Passengers repeatedly are instructed not to use their mobile phones and those restrictions are respected, at least as to voice calls.[142] Living conditions also are crowded and, in response, young people have discovered that silent text messaging avoids unwelcome attention both at home and away. Social and cultural norms that discourage disruptions have encouraged reliance on text based communication.[143]

The early introduction of technology that allows text messaging regardless of terminal type or service provider, the country's high literacy rate and familiarity with pictorial communication, and Japan's historical

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[139] MIZUKO ITO, PERSONAL PORTABLE PEDESTRIAN: LESSONS FROM JAPANESE MOBILE PHONE USE (Oct. 18–19, 2004), http://www.itofisher.com/mito/archives/ito.ppp.pdf (presented at the 2004 International Conference on Mobile Communication, Seoul, Korea).

[140] *Id.*

[141] *Id.*

[142] *Id.*

[143] *Id.*

affinity for portable technology all contributed to Japan's wide adoption of mobile communication.[144]

The mobile phone has come to represent a uniquely private, intimate space in a society where privacy is at a premium. One teenage couple may begin sending e-mail messages to each other as soon as school ends, continuing the communication through homework, dinner, and television time until they wish each other goodnight.[145] Described as "tele-nesting," this pattern of communication is dependent upon mobile communication, with the emphasis on mobile.[146] In fact, the mobile phone is called a "keitai," loosely translated as "a portable," rather than a phone.[147]

The keitai is not identified by its technical functionality, but by its ability to create an intimate "technosocial tethering" that is constant, lightweight, and reliable.[148] More specifically, the value of the keitai lies not in the fact that it allows one to communicate while moving about, but rather that it keeps social relations close by. Unlike laptop computers that routinely are switched on and off, the phones are always on, can be controlled with one hand, and can be viewed easily and privately even in crowded venues.[149] It is not uncommon to see Japanese children text messaging on their bicycles while they slowly weave their way down crowded sidewalks, or traveling in small groups simultaneously talking and typing into their phones.[150]

Japan may have been a national early adopter of mobile technologies, but similar practices now are commonly witnessed in the United States. Many of us have witnessed people walking, bicycle riding, or even driving, with their heads pointed downward as they furiously punch the keys on their cell phones. That desire to stay connected is being fully indulged by our children.

Observations about Japan and other nations are valuable not only to predict what may happen in the United States. We also must acknowledge that we are connecting with each other globally. Our relationships, and our

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[144] *Id.*

[145] A similar pattern was observed by Swedish and English researchers studying 16- to 19-year-old students in England. *See* SARA BERG, ALEX S. TAYLOR & RICHARD HARPER, MOBILE PHONES FOR THE NEXT GENERATION: DEVICE DESIGNS FOR TEENAGERS (2003), http://www.appliancestudio.com/publications/external/nextGenMobilesCHI.pdf.

[146] *See* ITO, *supra* note 139.

[147] *Id.*

[148] *Id.*

[149] *Id.*

[150] *Id.* (citing Kenichi Fujimoto, *The Third-Stage Paradigm: Territory Machines from Girls' Pager Revolution to Mobile Aesthetics*, *in* PERSONAL, PORTABLE, PEDESTRIAN: MOBILE PHONES IN JAPANESE LIFE 77, 83 (Mizuke Ito, Daisuke Okabe & Misa Matsuda eds., 2005).

disputes, are increasingly transnational. It was not long ago that when we thought about international disputes, we envisioned large multinational businesses. We sometimes forget that, calling upon the power of the Internet, we now can reach significant international audiences even when we act alone.[151]

Dispute resolvers must consider not only how our children are relying on technology mediated communication to interact and resolve disputes, but also how other cultures are using that technology. Regardless of the nature or size of a dispute, parties may be located anywhere on the planet. Those parties may expect dispute resolvers to understand how, and perhaps why, the parties rely upon technology mediated communication.

Thoughtful and visionary thinkers such as Thomas Friedman see the world changing in fundamental ways. The value-creation vertical model does not describe the future. We are moving from a "command and control" model to a "collaborate and connect" model.[152] We can source any product or any service from anywhere on the planet.[153] Dispute resolvers and problem solvers need to understand and use the same technology that is making trade and communication increasingly global. One reason we need to develop our technology mediated communication skills is that if we do not, someone else in the world who already is comfortable with communication technology can step in and take our place in any virtual space.[154]

B. *Too Much of a Good Thing?*

Is the ability to stay always connected too much of a good thing? A recent research project focused on United States university students and explored whether the ability to stay connected, at least through one technology, was universally valued or whether that ability made the students feel "tethered."[155] The study focused on "away messages," which is one

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[151] For a thoughtful and visionary perspective concerning the implications of technology, see THOMAS FRIEDMAN, THE WORLD IS FLAT: A BRIEF HISTORY OF THE TWENTY-FIRST CENTURY (2005).

[152] *See* Ellen Pearlman & Dan Briody, *The New York Times' Thomas Friedman on Globalization*, CIO INSIGHT, Mar. 25, 2005, http://www.cioinsight.com/article2/0,1397,1777087,00.asp.

[153] *Id.*

[154] We are witnessing the birth of the "micro multinational." *See id.*

[155] Naomi S. Baron, Lauren Squires, Sara Tench & Marshall Thompson, *Tethered or Mobile? Use of Away Messages in Instant Messaging by American College Students*, *in* MOBILE COMMUNICATIONS: RE-NEGOTIATION OF THE SOCIAL SPHERE 293–311 (Rich

component of the Instant Messaging system at America Online.[156] Away messages allow users to create a constant sense of "social presence," even when the user is physically absent.[157]

The study focused on away messages because until recently Americans have used their mobile phones more frequently to place and receive voice calls rather than to exchange text messages, in contrast to countries such as Norway and Japan.[158] A variety of Instant Messaging systems are available in the United States, including services provided by MSN and Yahoo, but many students use American Online's free platform, AOL Instant Messenger (AIM).[159]

Away messages allow an AIM user to stay connected while letting others know that he or she is temporarily absent.[160] While there are similarities between mobile phone short message services and away messaging, such as the asynchronous capability of each, there are important differences. Internet based away messaging is cost-free, cannot instantly lead to a synchronous conversation, and unless they are logged on to the Internet throughout the day, does not allow users to send messages as they move about.[161] These differences lead to the question of whether away messages are liberating or restrictive: does this service sustain a desired degree of connection or does this technology leave one feeling tethered?[162]

The away message samples studied were relatively small in number (190), so instead of attempting a statistical analysis, the authors tried to identify message types and the social function of the messages.[163] The authors observed that because American students carry laptop computers with them, and because public access computers are available (particularly on a university campus), the students can connect to the Internet easily and still have a feeling of mobility.[164]

Ling & Per E. Pedersen eds., 2005), *available at* http://www.american.edu/tesol/Grimstad-Baron.pdf.

[156] *Id.* at 293.

[157] *Id.*

[158] *Id.* at 294.

[159] *Id.* (asserting a majority of students use this service).

[160] An individual may be physically absent or simply may choose to reduce his or her presence.

[161] *See* Baron et al., *supra* note 155, at 295–96.

[162] *Id.* at 297.

[163] *Id.* at 297–99.

[164] *Id.* at 307–08.

One might expect that under these circumstances, students would use their messaging services as frequently as possible to stay connected. A focus group of five males and three females, frequent users of Instant Messaging, reported that while they did not feel tethered, they also did not carry their laptops around and seldom used public computers.[165] Rather, they felt a sense of relief when away from their computers and instead felt tethered when they logged on after an unusually long period offline and found hundreds of messages.[166]

Why did students feel free to walk away from their computers and leave their social circles? They were comfortable acting in this manner because the students were not actually leaving their social circles. The voice functions of mobile phones are being used to complement the written capability of computer mediated communications. When students leave their computers, they are switching modes, posting away messages directing their online buddies to call them on their phone.[167] The ability to stay connected is valued, but students do not feel dependent upon a particular medium.

What is important for us is that American students are using different technologies in a complementary fashion. One can not assume that a single mode of technology mediated communication will be adequate for dispute resolution.

The study concludes that, at least for university-age students, a cultural difference regarding mobile phone use still exists between the United States and other countries.[168] The study inquires, but does not answer, whether Americans, accustomed to full keyboards, will be willing to rely on small mobile phone keypads, whether SMS can be cost competitive, whether mobile phone users will get tired of inputting text, and whether Americans, tethered to their automobiles as opposed to public transportation, will find it impractical or impossible to rely on SMS.[169]

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[165] *Id.* at 308 & n.16

[166] *Id.* at 308.

[167] *Id.* at 309. For examples of the same use with mobile phones, see Kate Fox, Evolution, Alienation, and Gossip: The Role of Mobile Telecommunications in the 21st Century, http://www.sirc.org/publik/gossip.shtml (last visited Feb. 18, 2006) (observing that text messages are sometimes used as "trailers," alerting friends that one has interesting information but not disclosing the details, which leads to a face-to-face meeting or a voice call).

[168] Baron et al., *supra* note 155, at 309.

[169] *Id.* at 309–10.

Yet American parents are purchasing family mobile telephone plans that include up to four free phones[170] and giving those phones to their middle and elementary school aged children. Those children will not struggle with a transition from a full keyboard because they already are text messaging on their mobile phone keypad. And they are learning to move seamlessly between voice mail and text messaging. They will expect dispute resolvers to be similarly competent and when they act in the role of neutral they will rely on different mediums of communication.

So, is the ability to be connected at all times too much of a good thing? Some would say it is not only good, it actually is therapeutic. By facilitating communication in our fragmented modern world, the mobile phone is a "social lifeline" that recreates the natural communication patterns of pre-industrial life.[171] Mobile phones facilitate gossip, which stimulates the production of endorphins, relieves stress and boosts our immune systems.[172]

Gossip, in this study of 1000 representative mobile phone users, was defined as the informal communication of value-laden information about others.[173] Defined in this manner, exchanges do not have to be critical to qualify as gossip and the subject can be the speaker.[174] Furthermore, gossip of this nature:

> helps us to establish, develop and maintain relationships; to bond with other members of our social circle; to clarify our social position and status; to assess and manage reputations; to learn social skills; to learn and reinforce shared values; to resolve conflicts; to build support networks; to win friends and influence people[175]

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[170] Mike Dano, *Carriers Expand Offerings to Reach Unpenetrated Subs*, RCR WIRELESS NEWS, Apr. 11, 2005, at 1 ("[A]dvertising from most of the nation's carriers prominently features family calling plans, offering up to four free phones.").

[171] *See* Fox, *supra* note 167.

[172] *Id.*

[173] *Id.*

[174] Even critical gossip may not be without value. Negative gossip helps one discover and reinforces what is unacceptable in that society and also encourages social bonding. *Id.*

[175] *Id. But see* Margarita Martinez, *Colombian Town Makes Gossip a Crime*, ABC NEWS INT'L, May 16, 2005, http://abcnews.go.com/International/wireStory?id=763309. Mayor Jesus Ignacio Jimenez of Iconozo, Colombia issued an official municipal decree making gossip a crime punishable by as many as four years in prison. *Id.* According to the Mayor, gossip can result in people being jailed or murdered in a violent country like Colombia. *Id.* The decree also states that fines as high as $150,000.00 will be assessed for spreading false rumors. *Id.* As of the date of this article, no one had yet been arrested. *Id.*

If one is willing to accept this description, then one can argue that most language is gossip.[176] And it then would not be surprising that the majority of mobile phone calls involve gossip.[177]

Regarding whether the users chose to gossip by voice or text, the researchers were not surprised to discover that 16- to 24-year-olds had the greatest preference for text messaging and that 41% typically would use text instead of voice calls.[178] This is an even higher percentage than the percentage identified in the 2004 SMS Talker-Texter study discussed in the following subsection.[179] In addition to having a minimal cost, text messaging does have positive attributes. It requires users to learn to express themselves concisely, for instance (even if it does not appear to build grammar and spelling skills).[180]

More than one half of the survey respondents identified the phones' mobility as its most important benefit and the focus group reported that the ability "to gossip 'anytime, anywhere' was a significant and welcome change in their lives."[181] The abilities to exchange information immediately and privately, and to use both text and voice, increased the amount of gossip that was exchanged.[182] The researchers conclude that, in light of overwhelming evidence that gossip is beneficial, any technology that increases gossip also will improve social, psychological, and perhaps even physical health.[183]

If a particular technology not only facilitates the transfer of information but also potentially has therapeutic benefits, then dispute resolvers should explore how that technology can be integrated into their practices. A

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[176] *See* Fox, *supra* note 167.

[177] *Id.* A study of 159 students at Cardiff University in Wales examined 544 text messages and categorized those messages more specifically, identifying types and percentages of messages: friendship maintenance 23%, salutary 17%, practical arrangement 15%, informational–practical 14%, romantic 9%, social arrangement 9%, informational–relational 8%, sexual 3%, and chain message 2%. *See* Thurlow, *supra* note 12.

[178] Fox, *supra* note 167.

[179] *See infra* notes 191–201 and accompanying text. Although that study asked the slightly different question of whether a mobile phone user preferred text messaging, both studies note that cost may have a significant impact on one's decision to use text or voice, which may explain younger individuals' higher text usage.

[180] *See* Fox, *supra* note 167. Games or other applications that develop spelling and grammar skills for text messaging, however, could be introduced. The challenge is making them sufficiently appealing that they are used.

[181] *Id.*

[182] *Id.*

[183] *Id.*

particularly interesting observation was that simply holding a mobile phone can create a sense of security. The feeling that one's support network is "in" the phone means that merely touching or holding the phone can be reassuring.[184] Researchers working in Sweden and England studied 16 to 19 year old students in England and concluded, among other things, that the text messages saved, reviewed and shared on mobile phones embody personal thoughts and emotions and that the phone becomes a tangible memory box.[185] The teenagers often would write and read text messages together, passing the phone around or huddling together, a clear demonstration of phone use creating intimacy.[186] Rather than creating a brave new world, mobile phones and mobile gossip merely may be helping restore the sense of connection and community that we have lost.[187] We may be "using space-age technology to return to stone-age gossip."[188]

Tele-nesting Japanese are not the only ones who are using mobile phones to create intimacy. One study of 544 text messages sent by Welsh college students concluded that while text messaging does offer the advantages of greater mobility and affordability than e-mail, along with the ability to communicate discreetly, the over-riding gratification was that text messages satisfied the need for intimacy and social exchange.[189]

Technology mediated communication is easier and more widely available than some of us could have imagined just a few years ago. The rapid spread of wireless Internet access means that we can take our video, audio, and text capabilities with us as we move about. The notion that we can ignore the communication potential that these powerful technologies offer seems implausible at best. If we do not choose to rely increasingly on technology to resolve disputes in revolutionary and tangible ways, then others will step in to fill that void.[190]

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[184] *Id.*

[185] Berg et al., *supra* note 145, at 2.

[186] *Id.* at 3.

[187] *See* Fox, *supra* note 167.

[188] *Id.*

[189] *See* Thurlow, *supra* note 12.

[190] For a related discussion of the issues raised in this subsection, see David A. Larson, *Online Dispute Resolution: Do You Know Where Your Children Are?*, 19 NEGOT. J. 199 (2003).

C. *Text versus Talk*

A four year study that examined the psychological and social impact of SMS text messaging was published in 2004.[191] That study, for which almost one thousand individuals completed the relevant questionnaire, observed that SMS text messaging shares certain characteristics with Internet communication.[192] The immediacy, mobility, and constant accessibility provided by mobile phones permit almost conversational levels of synchronous texting, similar to online chat.[193] Yet texting also allows for asynchronous communication that, like e-mail, permits time for reflection, composition, and review.[194] These characteristics permit intimate personal communications while also providing the ability to control one's presentation.[195]

Based upon the information collected, respondents were divided into "Texters" and "Talkers." Texters, for instance, sent nearly twice as many text messages as Talkers and made less than one half the number of voice calls, spent more time composing and editing their messages, and were more likely to exhaust their character limit.[196] There was not a significant difference in the length of time that Texters and Talkers had owned mobile phones, suggesting that preferences for text were not determined by the amount of time individuals had owned phones.[197]

Although a majority of both Talkers and Texters preferred face-to-face communication for personal expression, more than quarter of the Texters preferred texting to face-to-face communications for personal

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[191] DONNA REID & FRASER REID, INSIGHTS INTO THE SOCIAL AND PSYCHOLOGICAL EFFECTS OF SMS TEXT MESSAGING (Feb. 2004), http://www.160characters.org/documents/SocialEffectsOfTextMessaging.pdf. Nine hundred and eighty-two respondents completed the questionnaire, of which 77.6% were British. The final questionnaire included 143 questions that addressed "demographic information, mobile phone ownership, text/talk preferences, mobile phone etiquette, phonebook contacts, language usage in text messaging, message collection, experiences with texting problems, and the use of texting in relationship development and maintenance." The study was advertised on a number of Internet sites, including at the researchers' University of Plymouth site in the United Kingdom, other universities, newspapers, list servers, and one of the Internet's largest search engines. *Id.* at 3–4.

[192] *See id.* at 2.

[193] *Id.*

[194] *Id.*

[195] *Id.* at 3.

[196] *Id.* at 4–5.

[197] *Id.*

communications (which was four times greater than the number of Talkers).[198] Texters responded that they were more comfortable revealing certain ideas and information through texting than they were face-to-face, confirming that text messaging can encourage intimacy.

It is significant to note that an almost equal number of respondents were identified as either Talkers or Texters in this study.[199] When we look closely at individuals who behave like the Texters described above, we are not focusing on a small subset of individuals.

Texters reported that text messaging not only improved their existing relationships with friends and family, but that text messaging also assisted in developing new relationships.[200] The individuals who identified themselves as lonelier and more socially anxious expressed themselves more effectively through text and, thus, the availability of this medium had a positive impact on their relationships.[201]

One of the challenges in dispute resolution is to gain the trust of those who are reticent or outright resistant. Texters use text messaging because it allows for more effective self-expression. Text messaging is a medium that helps Texters feel closer to their friends and families. If this is the medium by which we can reach a significant portion of the population, then it seems senseless, if not negligent, to ignore its potential. We need to consider how this medium can be formally and structurally integrated into dispute resolution processes.

D. *Networked Individualism*

Networked Individualism is a phrase used to describe our contemporary society, which is characterized by local and long distance relationships, loosely connected personal networks that include densely knit groups, and relationships that are created and dissolved more easily than in the past.[202] The concept is evolving and its originators recently expanded the description by adding two more characteristics. Networked Individualism also means that in our society numerous relationships are formed with individuals from

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[198] *Id.*

[199] *Id.* at 4.

[200] *Id.* at 7.

[201] *Id.* at 8.

[202] *See* Boase & Wellman, *supra* note 10; *see also* BARRY WELLMAN, LITTLE BOXES, GLOCALIZATION, AND NETWORKED INDIVIDUALISM (Feb. 2004), http://www.chass.utoronto.ca/~wellman/publications/littleboxes/littlebox.PDF.

different social backgrounds and that, while many social connections are strong, most relationships are weak.[203]

Without needing to embrace this description as prescient and definitive, dispute resolvers may find it has at least some value. The notion of Networked Individualism presents problems and opportunities that can be addressed in the way that we think about dispute resolution and the way that we use technology mediated communication. For instance, even if a relationship is local, e-mail is not an exclusive option, and individuals can use e-mail to arrange meetings to increase offline contact.[204] Even if individuals do not share mutual friends or social connections, and even if the formation of a new relationship would be discouraged offline by existing relations that might disapprove, a new relationship can still develop because of the wide reach and insulation from social pressure the Internet provides.[205] That possibility creates wonderful opportunities for problem solving and dispute resolution.

Although evidence suggests that the Internet may be used more frequently to maintain relationships than to create new ones,[206] the Internet nonetheless is being used for both purposes. For some individuals, the Internet is not the most suitable venue for initiating problem solving or a simple conversation. Yet even for those individuals, the Internet still may offer the best "space" for continuing and building upon the momentum created through an initial face-to-face meeting. If nothing else, the ability to communicate quickly, easily, and asynchronously means that communication channels can remain open. And for some individuals, the online environment provides the sense of distance and protection they need for an intimate conversation. Quite simply, the Internet may provide a more productive environment for continuing a conversation than a series of face-to-face meetings would provide.

Dispute resolvers understand that it is essential to recognize cultural differences. One of the great challenges is to identify and respect those differences and to create an accommodating environment. Although e-mail messaging can utilize verbal cues and appropriate language choice is a

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[203] Boase & Wellman, *supra* note 10.

[204] *Id.* (citing Irina Shklovski, Sara Kiesler & Robert Kraut, *The Internet and Social Interaction: A Meta-analysis and Critique of Studies, 1995–2003*, *in* DOMESTICATING INFORMATION TECHNOLOGY (Robert Kraut et al. eds., forthcoming Mar. 2006), *available at* http://www.cs.cmu.edu/~kraut/RKraut.site.files/articles/Shklovski04-InternetUseSocialRelationships-meta-analysis.pdf).

[205] Boase & Wellman, *supra* note 10.

[206] *Id.*

critical consideration, body language and appearance are not at issue. E-mail and short text messaging can make it easier to communicate cross-culturally,[207] keeping in mind that presentation, tone, and word choice still have cultural significance.

VI. AVATARS AND VIRTUAL PERSONALITIES

When attempting to identify interests, reservations, and concerns, neutrals may prefer to work with emotionally expressive parties that have a collaborative orientation. In fact, they may want to work with avatars.

Possessing an indisputably cool name, avatars have been succinctly defined as a "graphic representation of a real person in cyberspace."[208] The author was first exposed to avatars as a recipient of a one year U. S. West Technology Fellowship. Five professors from different schools at Creighton University, where the author was a member of the law school faculty, were selected as Fellows. During that very enjoyable and informative year, the Fellows were introduced to basic computer hardware components and numerous software programs. One of the individuals or, more specifically, one of the virtual personalities introduced to us was Sylvie, a bright young verbot.[209]

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[207] *Id.*

[208] Glossary, Compu-KISS, www.compukiss.com/ck/glossary/glossary.cfm (last visited Feb. 18, 2006). In Hinduism, an Avatar is defined as the "incarnation (bodily manifestation) of an Immortal Being, or of the Ultimate Supreme Being. It derives from the Sanskrit word *avatāra* which means "descent" and usually implies a deliberate descent into mortal realms for special purposes. The term is used primarily in Hinduism, for incarnations of Vishnu the Preserver, whom many Hindus worship as God." Avatar, Wikipedia, http://en.wikipedia.org/wiki/Avatar (last visited Feb. 18, 2006). Webster's dictionary defines an avatar as "the incarnation of a Hindu deity (as Vishu); an incarnation in human form; an embodiment (as of a concept or philosophy) often in a person; a variant phase or version of a continuing basic entity." Merriam-Webster Online Dictionary, www.m-w.com (search Online Dictionary for "avatar") (last visited Feb. 18, 2006). If you would like to experiment with avatars interacting in a three dimensional environment, you can visit, among other web sites, http://activeworlds.com/.

[209] The Auridian Reference Glossary defines a verbot as "[a] software simulation of a person or icon that communicates verbally with the user." Glossary of Technology Terms, http://www.auridian.com/glossary/HTML/V.htm (last visited Feb. 18, 2006). Verbot is a trademarked term owned by Conversive, Inc., formerly Virtual Personalities, Inc. Sylvie was introduced and beta tested beginning in 1997. For a brief developmental history and the current status of verbots, see http://www.verbot.com/aboutus.php (last visited Feb. 18, 2006).

Verbots are avatars whose primary function is verbal communication. They can, however, have a variety of facial expressions that support their speech. The author demonstrated verbots at several dispute resolution conferences and suggested possible uses for avatars and verbots in the dispute resolution field. Regrettably, the author never more fully developed the idea. There was no excuse for that lapse, because one of the other Fellows already had provided a first-hand demonstration as to how avatars can assist when dealing with sensitive subjects.

Dr. Gary Gorby is an infectious disease specialist who, among many responsibilities, teaches medical students about disease transmission and protection. His experience was that it can be difficult for medical students to interview patients concerning sexually transmitted diseases and the patients' sexual histories. The students' discomfort, however, which was manifested in a reluctance to ask certain essential questions, could have catastrophic consequences.

Even at the time of our Fellowships, verbot technology allowed users to script audio conversations that would proceed back and forth between the human operator and the verbot based on a voice recognition system, such as IBM Via Voice or Dragon Naturally Speaking. The effect was dramatic and almost mesmerizing. It was amazing to watch a room full of professional school students, and on occasion professionals, intently watching a verbot projected on a twenty foot screen being interviewed by a medical professional about sexually transmitted diseases. As a Canadian media studies professor with more than a decade of experience teaching online describes it: "Sylvie elicits a compelling attention from her audience when called upon to speak personally and with expressions of emotion. The effect is strangely disturbing and humorous to hear an artificial intelligence, with tell-tale cyborgian rhythms and inflections, speak with [feigned] emotion."[210]

Regardless of the specific character selected as the verbot, which could range from humans to mythical monsters, the interactive, expressive conversational characters that Dr. Gorby used attracted great interest. Sylvie was an attractive young woman representing one type of patient with whom some medical students had difficulty talking about intimate and highly personal sexual practices. Sylvie allowed Dr. Gorby to demonstrate how an interview about sexually transmitted diseases can proceed in a manner that minimizes discomfort, yet still obtains the critical information. Verbots also can be used to educate the patients themselves about safe sex practices.

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[210] Marshall Soules, Animating the Language Machine: Computers and Performance (2002), http://www.mala.bc.ca/~soules/animate.htm (last visited Feb. 18, 2006).

The World Health Organization reports that AIDS killed an estimated 3.1 million people in 2005.[211] In other words, AIDS kills over 8000 people every day or one person every ten seconds.[212] HIV is responsible for more deaths than any other infectious agent; AIDS has caused more than twenty-five million deaths.[213] If physicians are relying upon avatars and verbots to fight diseases as murderous as HIV/AIDS, then it is difficult to believe that there is not a place for avatars in dispute resolution processes.

After giving the same orientation speech hundreds of times before mediation, for example, a neutral may lose some of his or her enthusiasm, or may not be quite as thorough as he or she once was. Perhaps an always rested, always interested, very human and empathetically voiced avatar could provide an orientation, or at least begin that orientation.

If a dispute resolution process occurs online, then certainly there could be a place for an avatar. Although the notion of a graphic character taking responsibility for significant issues in a dispute resolution process may seem abhorrent, keep in mind that our children have learned to be very comfortable interacting with graphic characters. And, in fact, our children may find those characters easier to trust than unfamiliar humans.

Children may trust video and graphic figures because those figures are among the first personalities with whom children become acquainted. A Parent Media Survey conducted in 2004 inquired as to the television viewing patterns of children under the age of two.[214] Two hundred and twenty-one families located in the Buffalo, New York area participated.[215] The survey revealed that more than one half of the children watched videos or television and that the mean age for beginning to watch had been 6.1 months and 9.8 months, respectively.[216]

By the time they were 23 months old, 100% of the children less than two years old watched television for more than one hour per day and 90% watched videos for 25 minutes per day.[217] Babies as young as one month old

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[211] UNAIDS & WORLD HEALTH ORG. (WHO), AIDS EPIDEMIC UPDATE 2 (2005), http://w3.whosea.org/LinkFiles/Facts_and_Figures_PDFepi-update2005.pdf.

[212] *See id.*

[213] *Id.*

[214] Weber & Singer, *supra* note 26, at 31.

[215] *Id.* at 32. The researchers acknowledge that the sample was not sufficiently ethnically or culturally diverse. *Id.* at 36.

[216] *Id.* at 32.

[217] *Id.* American Academy of Pediatric recommendations that children under two years old not watch any television and that children over two be restricted to one or two hours of educational programming apparently are being ignored. A 2003 national study

watch videos.[218] Eighty-three percent of all the children 0–23 months were "somewhat concentrating," "concentrating," or "concentrating very much," as they watched television.[219]

The study then rated television and video content based upon six variables: cognitive, social, physical, emotional, multicultural and music.[220] Each variable has four to seven more specific characteristics that were used in the rating system.[221] The researchers suggest that based on this data, parents and teachers can select television programs and video tapes for specific teaching purposes.[222] There is no reason why avatars cannot be used similarly for specific purposes.

Given that they are being weaned on television and video imagery, there is little doubt that these children will respond favorably to avatars and virtual personalities as they move into adulthood. Children are, in fact, comfortably communicating through avatars already. Georgetown University's Children's Digital Media Center created a multi-user domain to study how 84 primarily 11 and 12 year old girls and boys (42 of each gender) would interact online and how the girls and boys would present themselves.[223] Online multi-user domains allow users to choose names, genders, costumes, and self-descriptions and to then interact through a graphic image.[224] Thus the boys and girls could create an identity and communicate using avatars (although unlike the avatars described above, these avatars use text in a cartoon bubble instead of voice).

Each student decided whether he or she wanted to be a boy or a girl, chose one of five costumes, and could control where his or her avatar would

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that focused on children aged zero to six years old reports that 68% of children younger than two years old use screen media in a normal day (TV, video, DVD, or computer), 43% of children younger than two years old watch television every single day, more than one quarter (26%) of those young children have a television in their bedroom, and 74% of those infants and toddlers have watched television before they turn two years old. *See* CONNECTED TO THE FUTURE, *supra* note 35, at 5.

[218] Weber & Singer, *supra* note 26, at 33.

[219] *Id.* at 34.

[220] *Id.*

[221] *Id.*

[222] *Id.*

[223] *See* Calvert et al., *supra* note 42. The children were drawn from four schools, two public and two private. The schools were located in Tampa, Florida; Merion Station, Pennsylvania (a Philadelphia suburb) and two schools in Washington, D.C. The ages ranged from ten years and five months to thirteen years and one month. *Id.* at 630–31.

[224] *Id.* at 628.

appear in various scenarios.[225] The girls and boys had six different facial expressions and associated body positions that they could present, and change, through their avatars: happy, silly, sad, surprised, angry and bored.[226]

Each child was paired once with a boy and a second time with a girl and interacted by writing dialogue, changing facial expressions and body postures, and moving the avatar among six different scenes (for example, between a beach and a city).[227] Interestingly, when it came to designing an avatar, the children selected attributes that reflected themselves in terms of names, gender, costumes and roles.[228] This indicates that the children felt very comfortable using avatars to present themselves as they see themselves.[229] In the words of the researchers:

> Even when given the chance to experiment with children who did not know them, the overwhelming preference was to make avatars, act, and use language in ways that often paralleled their real lives. These kinds of interactions . . . will only become more commonplace as digital technologies increasingly permeate the daily lives of our youths.[230]

Children in same sex pairs generally interacted as they do offline. Boys in pairs moved around, changed scenes and emotions, and played games more than girls in pairs, who preferred to use words to interact.[231] This suggests that children can transfer developing beliefs and interaction styles from one communication medium to another.[232]

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[225] *Id.* at 631. The avatar could appear as a soccer player, firefighter, wizard, a "punk" in a leather jacket, or simply in jeans and a T-shirt.

[226] *Id.* at 631–32.

[227] *Id.* at 631–33.

[228] *Id.* at 640. The researchers scored the interactions by observing the variables of self-presentation and avatar construction, character movement, character dialogue (totaling the words spoken by each character), emotional expressions, scene changes, willingness to engage in role play, and willingness to play online games, such as hide and seek. *Id.* at 633–35.

[229] Gender differences were reflected in character selection. When it came to choosing characters, boys chose more punk characters in leather jackets and girls chose more soccer players. The researchers did not offer a traditional stereotypical female character choice. *Id.* at 640–41.

[230] *Id.* at 642.

[231] *Id.*

[232] *Id.*

One observation is particularly relevant for this article. When a girl was paired with a boy, the boys' avatars' behavior became more like the behavior witnessed when girls were paired, and vice versa.[233] The researchers concluded that because neither boys' nor girls' interactive style dominated, both girls and boys were willing and able, through their avatars, to modify their interactive styles in order to facilitate communication.[234]

The fact that children are willing to modify their interactive styles when communicating through avatars should not be ignored. Although this form of technology mediated communication need not be exclusive, there may be places and times where a switch to this mode of communication will encourage parties to change their positions or styles and move the parties beyond an impasse.

Digital buddies are not quite the same thing as avatars, although the two could be integrated quite productively. Digital buddies provide another example of how readily individuals respond to virtual personalities. Digital buddies are interactive software applications referred to as "bots." Although generally being used to distribute product information, they are programmed to make friends, engage in small talk, take cues from the human user's responses, and to search databases for suitable material for each conversation.[235]

Digital buddies can be witty and provocative and can present a virtual personality.[236] Users engage in serious conversations with their digital buddies in spite of the fact that no one is there.[237] Even by 2003, for instance, more than eight million users had signed up for SmarterChild,[238] a bot with which (or perhaps with whom) one can chat "on the Web, over IM, or on a

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[233] *Id.* at 641–42.

[234] *Id.* at 642.

[235] Christine Frey, *Web Friends with a Message*, GULF NEWS ONLINE EDITION, Jun. 16, 2003, http://www.gulf-news.com/Articles/people-places.asp?ArticleID=90412.

[236] *Id.*

[237] *Id.* For another example of virtual personalities generating a creative and personal response, note the phenomenon of fanfiction, or "fanfic." Attributed as a response in large part to Japanese animation (anime), middle and elementary students are writing, sharing, and adding to stories inspired by Japanese cartoons, sometimes creating autobiographical characters and writing themselves into the stories. *See* Kelly Chandler-Olcott & Donna Mahar, *Adolescents' Anime-Inspired "Fanfictions": An Exploration of Multiliteracies*, 46 J. ADOLESCENT & ADULT LITERACY 556, 556 (2003). For more detail regarding fanfiction, see Lankshear & Knobel, *supra* note 15, at 4–8.

[238] Frey, *supra* note 235.

wireless device, the same way you talk to any other contact."[239] Yes, you heard that correctly, the same way that you talk to any other contact.

Many of the issues that must be addressed through dispute resolution processes are highly sensitive and personal. An avatar, or another virtual personality, could initially raise or introduce issues that then would be further developed and explored by the neutral.[240] Researchers are concluding that emotionally expressive avatars incorporated into "collaborative virtual environments" can create empathy in those environments.[241] The emotions of others can influence our decisions and emotional states, and our own emotions can assist in problem solving, affect cognition, and motivate.[242] Emotion encourages reflective dialogue and thus may be a key to higher learning beyond purely cognitive.[243] Accordingly, an avatar that can effectively and appropriately demonstrate emotion can make a valuable contribution to dispute resolution processes.

The value of the avatar's ability to introduce emotion into a dispute resolution process that is completely technology mediated, and that does not have a face-to-face component, appears obvious. But an avatar also may prove helpful even when parties convene for dispute resolution processes that will proceed primarily face-to-face.

The research work that is being done with avatars is fascinating. One study constructed a "simplified" virtual head that incorporates only twelve of the fifty-eight "action units" that normally are used.[244] This allows the head to display facial expressions that indicate happiness, surprise, anger, fear, sadness, and disgust, as well as a neutral expression.[245]

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[239] SmarterChild, http://smarterchild.conversagent.com/faq.shtml#whatis (last visited Feb. 18, 2006); *see also* Conversagent.com, http://www.conversagent.com/ (last visited Feb. 18, 2006).

[240] Of course, someday that interactive prescient neutral will not be human.

[241] Marc Fabri & David Moore, THE USE OF EMOTIONALLY EXPRESSIVE AVATARS IN COLLABORATIVE VIRTUAL ENVIRONMENTS, SYMPOSIUM ON EMPATHETIC INTERACTION WITH SYNTHETIC CHARACTERS (Apr. 2005), http://www.lmu.ac.uk/ies/comp/staff/mfabri/papers/aisb2005.pd). The authors define "empathy" as the accurate understanding of the feelings and mental states of the individuals using the collaborative virtual environment achieved through their emotionally expressive avatars. *Id.* at 1.

[242] *Id.* (citing R. PICARD, AFFECTIVE COMPUTING (1997); A. DAMASIO, DESCARTE'S ERROR: EMOTION, REASON, AND THE HUMAN BRAIN, (1994)).

[243] Fabri & Moore, *supra* note 241 (citing A. BROCKBANK & I. MCGILL, FACILITATING REFLECTIVE LEARNING IN HIGHER EDUCATION (1998)).

[244] *Id.*

[245] *Id.*

Research participants were placed in a classic survival situation: stranded in a remote and hostile area with the need to salvage items from their vehicle's wreckage before it explodes. The participants were asked individually, and then jointly, to rank each item's importance for the participants' survival. Participants chose one of three male or three female avatars for his or her virtual embodiment. Any message spoken by an avatar was shown in the chat log and also placed above the avatar's head in a speech bubble. The participants' avatars could be controlled to show the six emotions described in the preceding paragraph.[246]

The avatar's expressions were not automatically linked to the participants' behavior and the participants could choose expressions as a deliberative communicative act. The researchers wanted to learn whether the avatars' expressive capabilities enhanced the "richness" of the participants' experiences.[247] The participants were between 21 and 58 years of age, equally divided between men and women, and had little previous experience with applications or games that used three-dimensional characters.[248]

The researchers concluded that, through their avatars, the participants employed emotions deliberately both for emphasis and to influence the conversations.[249] When there were disagreements, the participants used the avatars' facial expressions to appease, to increase the sense of togetherness, or to elicit an empathetic response.[250]

A fascinating part of this study is a section asserting that collaborative virtual environment technology is potentially valuable for individuals with autism.[251] The researchers perceive autism as a "triad of impairments."[252] First, a social impairment makes it difficult for a person with autism to empathize with, and relate to, other individuals.[253] Second, communication impairment makes it challenging for an individual with autism to comprehend and use verbal and nonverbal communication.[254] And third, an individual with autism may tend to be rigid and inflexible regarding thinking,

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[246] *Id.* at 2.

[247] Richness was measured by monitoring involvement in a given task, enjoyment, the degree of presence, and the level of task performance. *Id.*

[248] *Id.* at 3.

[249] *Id.*

[250] *Id.* The researchers caution, however, that their conclusions are only preliminary and that much work needs to be done.

[251] *Id.*

[252] *Id.* (citing L. WING, AUTISM SPECTRUM DISORDERS (1996)).

[253] *Id.*

[254] *Id.*

language, and behavior.[255] A collaborative virtual environment technology may benefit individuals with autism as an assistive technology, an educational technology, and as a means for addressing a "Theory of Mind" impairment.[256]

As an assistive technology, collaborative virtual environment technology can make communication simpler and less threatening than face-to-face communication. The technology still does, however, facilitate direct communication and allow the user to make independent choices as he or she interacts. Additionally, to the degree that this technology slows the pace of communications, it can provide people with autism time to consider alternative ways to respond to particular circumstances.[257]

Avatars can be helpful educationally because they can provide rehearsal opportunities for approaching "real world" events.[258] By allowing users to express emotions by choosing an avatar's facial impression, and by requiring those users to interpret and understand the avatar's expressed emotions, this technology may help concerning Theory of Mind issues.[259]

For the part of the study examining autism, 100 potential school age participants with a diagnosis of autism were invited to participate. Eighteen children diagnosed with Asperger Syndrome and sixteen with severe autism, age 7.8 to 16 years, ultimately participated. The participants showed response levels significantly above the levels that would be generated by chance. Thirty of the 34 participants used avatars at levels demonstrably better than chance.[260]

So why include references to HIV/AIDS and autism in a discussion about dispute resolution and avatars? HIV/AIDS and other sexually transmitted diseases continue to plague the world's population. Health care providers are calling upon every available tool, including avatars, in the fight against these diseases. Computer specialists are thinking creatively about how technologies can be enlisted to help treat conditions like autism for which we still have inadequate understanding and treatment. And the use of

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[255] *Id.*

[256] *Id.*

[257] *Id.* at 4.

[258] *Id.*

[259] *Id.* The researchers respond to concerns that the technology may increase social difficulties by encouraging even greater withdrawal by arguing that: this technology is more interactive, not less interactive; this technology is not being advocated as an exclusive therapy, rather, collaborative working practices should be used in addition to the technology; and the variability and unpredictability of this environment reduces the chances it will be used obsessively.

[260] *Id.* at 5.

avatars in medicine certainly is not limited to sexually transmitted diseases and autism. Avatars can provide assistance in many situations when one needs to communicate information or inspire positive behaviors.

And avatars can be used in dispute resolution processes. In any circumstance where communication proves difficult because of the physical surroundings or the inability/unwillingness of the parties to participate, as unfamiliar and curious as it may sound, avatars may be able to help.

VII. Is There Any Place for Mindful Meditation in the Next Generation?

Recall the discussion about children and their television watching habits from the Avatar and Virtual Personalities subsection above.[261] To put it simply, today all young children are watching television.[262] An intriguing question is whether, and to what degree, does exposure to television and other technology affect a child's physiological and neurological development.

It is one thing to argue, as this article has, that familiarity with a technology will create patterns of communication that children will be unwilling to abandon. Children have learned how a technology can work for them, they have adapted it to their needs, and they are not going to stop using that technology. The author maintains that the dispute resolution field has to accommodate that development.

It is quite another thing to argue not merely that dispute resolution processes must change to accommodate communication modes that children have voluntarily embraced, but that the field will have to change because children are being altered physiologically and neurologically by repeated exposure to technology. How is that for a brave new world?

But let us first set the stage for what may be a significant disconnect between generations. One currently popular suggestion as to how dispute resolvers can improve involves "mindfulness meditation." Professor Leonard Riskin, one of the best known and most respected academicians working in the dispute resolution field, has been writing about this concept for several years.

Only a select few individuals in any field have introduced concepts that are so complete and compelling that those concepts are universally recognized by the creator's name, such as the "Riskin Grid." Professor Riskin analyzed mediators' goals and assumptions based upon a facilitative-

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261 *See supra* notes 208–13 and accompanying text.

262 *See supra* note 217 and accompanying text.

evaluative continuum and then presented his conclusions graphically as a square divided into four quadrants, evaluative-narrow, evaluative-broad, facilitative-narrow and facilitative-broad.[263] The decision to present his analysis graphically was brilliant in its simplicity and clarity. Academicians and practitioners alike embraced Professor Riskin's notion that a grid could describe mediators' orientations succinctly.

A demonstrated progressive and innovative thinker, Professor Riskin now has turned his attention to a fundamental challenge of the human condition, the fact that our daily demands, our personal deadlines, our prejudices and assumptions can draw us away from the present and cause our minds and attention to wander.[264] Professor Riskin contrasts this tendency to drift away with a sense of "mindfulness," being aware of one's bodily sensations, thoughts, emotion, impulses, and consciousness from moment to moment, without forming any judgments.[265]

If one is not mindful, then that mindlessness will interfere with dispute resolution efforts. If one is not focused on the moment, then that lack of focus may interfere with the ability to gather information, to listen, and to understand.[266] One may rely upon habits and assumptions, instead of trying to determine the best approach for the particular circumstances.[267] One may act as if on autopilot, doing whatever he or she typically does as a second or third step in a dispute resolution process, for instance, instead of trying to decide what is most appropriate in a certain situation.[268]

Professor Riskin observes that teachers and trainers generally assume that students come to class with the awareness and attention capabilities that not only make it possible to understand dispute resolution strategies, but also make it possible to effectively implement those strategies.[269] This assumption, he asserts, is a mistake and there is a great need to provide

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[263] Leonard L. Riskin, *Understanding Mediator Orientations, Strategies, and Techniques: A Grid for the Perplexed*, 1 HARV. NEGOT. L. REV. 9, 13 (1996).

[264] *See* Riskin, *supra* note 3, at 79.

[265] *Id.* at 83 n.24 (citing JON KABAT-ZINN, FULL CATASTROPHE LIVING (1990); JOSEPH GOLDSTEIN, INSIGHT MEDITATION (1993)).

[266] *Id.* at 80 (citing Leonard L. Riskin, *The Contemplative Lawyer: On the Potential Contributions of Mindfulness Meditation to Law Students, Lawyers and Their Clients*, 7 HARV. NEGOT. L. REV. 1, 23 n.108 (2002)).

[267] *Id.*

[268] *Id.* (citing ELLEN J. LANGER, MINDFULNESS (1989)).

[269] *Id.* at 83.

training to develop the foundational capabilities of awareness, emotional sophistication, and understanding.[270]

It is not apparent that even an acclaimed expert like Riskin appreciates how great that need may be for the next generation. One would be hard pressed to argue that mindfulness is not a positive characteristic for a dispute resolver. But the call for mindfulness may not resonate with our children as they become adults as clearly as it does with the current generation of dispute resolvers. And, in fact, even if it sounds appealing to them, the state of mindfulness may be much more difficult to achieve for the next generation.

Social science research is providing information that has implications for the viability of a mindfulness approach. We all know that new information and communication technologies continue to become more user-friendly. These improvements result in shifts as to how individuals use their time.[271]

For example, watching television has been shown to be less satisfying than interacting with friends.[272] Yet television is always available, does not require coordinating another person's actions, and can be consumed easily in small segments. Consequently, it is an essentially effortless way to kill time and this non-deliberate, or unmindful, choice about how to spend time can have serious personal and social consequences.[273] The discussion gets particularly interesting, however, if one has reason to believe that spending time with rapidly changing media is not really a choice, but instead a need.

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[270] *Id.* (citing Lori Schreier, *Emotional Intelligence and Mediation Training*, 20 CONFLICT RESOL. Q. 99 (2002); Marjorie A. Silver, *Love, Hate and Other Emotional Interference in the Lawyer/Client Relationship*, 6 CLINICAL L. REV. 259 (1999); Daniel L. Shapiro, *A Negotiator's Guide to Emotion: Four "Laws" to Effective Practice*, DISP. RESOL. MAG., Winter 2001, at 3–4). There is no consensus as to what "mindfulness meditation" can accomplish. Professor William Blatt agrees that mindfulness mediation may increase emotional intelligence to some degree, but asserts that psychological techniques can increase this form of intelligence much more effectively. *See* William S. Blatt, *What's Special About Meditation?: Contemplative Practice for American Lawyers*, 7 HARV. NEGOT. L. REV. 125 (2002). Professor Blatt emphasizes that while meditation can strengthen awareness and improve ones' focus, meditation is a spiritual practice and most importantly a search for the God within oneself. *Id.* at 125. Other commentators similarly assert that, in order to make the approach palatable, mindfulness meditation must be divorced from eastern religions. Mindfulness meditation is not mystical but, rather, based upon "reason, analysis and skepticism." Douglas Codiga, *Reflections on the Potential Growth of Mindfulness Meditation in the Law*, 7 HARV. NEGOT. L. REV. 109, 109–10 (2002).

[271] Brynin & Kraut, *supra* note 8.

[272] *Id.* (manuscript at 17).

[273] *Id.* (suggesting this choice contributes to obesity, for example).

Lead researcher Dr. Dimitri Christakis, co-Director of the Child Health Institute and an associate professor of pediatrics at the University of Washington, focused on the question of whether children who are exposed to television at a very young age (one to three years old) experience attentional problems as they grow older.[274] His work is groundbreaking and the results are provocative.

The study notes that infants' brains develop rapidly during the first few years and that there is significant "plasticity."[275] The visual and auditory experiences of young children may have a substantial influence on brain development.[276]

The study relied on nationally representative observational data for 1,278 children who were one year old and 1,345 children who were three years old,[277] and the results cannot be ignored. One year old children watched an average of 2.2 hours of television per day and three-year-olds watched an average of 3.6 hours per day.[278] Controlling for a number of factors that included prenatal substance abuse, gestational age, maternal psychopathology, and socioeconomic status, the study concluded that a one standard deviation increase in the hours of television that a one-year-old watches is associated with a 28% increase in the probability of finding attentional problems when the child turns seven years old.[279] A similar conclusion was reached for three-year-olds.[280]

The researchers acknowledged limitations and stated that they could not draw causal inferences based on the data.[281] For instance, attentional deficit problems may cause more television viewing rather than vice versa, and parents' who neglect their children and place them in front of the television may create an overall environment that encourages attentional problems.[282] The researchers attempted to account for possible contributing factors that include home environment, maternal depression, cognitive stimulation, and

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[274] *See* Dimitri A. Christakis, Frederick J. Zimmerman, David L. DiGiuseppe & Carolyn A. McCarty, *Early Television Exposure and Subsequent Attentional Problems in Children*, 113 PEDIATRICS 708 (2004), *available at* http://www.aap.org/advocacy/releases/tvapril.pdf.

[275] *Id.* at 708.

[276] *Id.*

[277] *Id.* at 710.

[278] *Id.*

[279] *Id.*

[280] *Id.*

[281] *Id.* at 711.

[282] *Id.* at 712.

emotional support, but admit that they may not have been successful.[283] And the researchers made no attempt to distinguish television content.[284] The study concludes, nonetheless, that problems sustaining attention may result from watching television at a very young age.[285]

This article is not arguing that technology has created a generation that literally is unable to concentrate on a single subject for an extended period of time. But there is evidence that highly stimulating, quickly changing technologies can affect children's ability to concentrate. And it all may be a matter of degree. Even if the changes are not so significant that they would be diagnosed as attention deficit order, those physical changes still may alter behavior.

There is a general consensus that mindfulness is a desirable, and perhaps even essential, attribute for dispute resolvers. If this is true, then it is not clear whether those who preach mindfulness appreciate how much training will be required for the next generation. In fact, one has to think very specifically about how, and even whether, that generation can be reoriented towards a slower, more reflective style of communication.

VIII. A NEW PARADIGM FOR ADR

It obviously is difficult to predict how technology will change behavior. Although the Internet was used primarily for social purposes in the mid-1990s, it now provides more individualistic, recreational and informational options.[286] One might conclude that the Internet is pulling people apart in different directions. Yet the fact that more people have access to the Internet means that we now have greater opportunities to connect with others, and technologies like instant messaging allow users to quickly and easily expand contacts.[287]

The wonderful and reassuring quality about technology is that individuals will adapt technology to their needs. For instance, the text messaging capability of mobile phones, an apparently asynchronous service, is being used synchronously to achieve intimacy.[288]

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[283] *Id.*

[284] *Id.*

[285] *Id.*

[286] *See* Brynin & Kraut, *supra* note 8, at 18.

[287] *Id.*

[288] *See supra* notes 185–86 and accompanying text; *see also* Thurlow, *supra* note 12, at 17 (observing that Welsh college students used the ostensibly asynchronous mobile phone synchronously for intimacy and social exchanges).

This article is not concerned primarily with the question of how ADR processes can integrate technology in a way that will benefit parties that have a dispute right now. This article is concerned with the question of how ADR processes will change if a neutral wants to interact with the next generation using their mediums of communication, mediums with which they are comfortable. It also is interested in how the next generation will practice dispute resolution.

Although technology mediated dispute resolution for the next generation may look different than the ADR processes with which we are familiar, and although current research about technology and existing ADR processes may not be completely applicable, one still must review the limited work that has been done concerning computer mediated communication and current ADR processes. Negotiators using e-mail have been observed taking turns exchanging offers. The conversational format that these exchanges assume facilitates trust and enhances outcomes.[289] Our children are continuing to use a conversational format with their technology mediated communications, albeit one that often is stylized and, at first glance, rather cryptic. We can expect conversational exchanges to continue as a way to build trust.

How will alternative dispute resolution processes change as the next generation finds occasion to need dispute resolution? Technology mediated dispute resolution assuredly will be more asynchronous than dispute resolution processes are now. Not only children, but also adults, are embracing the power and convenience of asynchronous communication.

We may no longer be setting aside blocks of time for dispute resolution. For a generation that began using technology to multitask in elementary school, if not before, the notion of resolving a dispute while attending to other issues will seem perfectly reasonable. High percentages report accessing the Internet from locations other than home, and those individuals will be comfortable participating in dispute resolution from remote locations.

Dispute resolvers already are using e-mail messages to communicate with parties, although the communications often are preparatory in nature. We can expect that the next generation of children will be comfortable exploring the most sensitive issues using technology. And, in fact, they may prefer to address those issues using technology.

The next generation increasingly will use video. Our children are comfortable communicating with, and through, graphic images. Although many current dispute resolvers would like to integrate more video in dispute resolution processes, and are restricted only by the current limitations of

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[289] *See* Bastress & Harbaugh, *supra* note 4, at 137.

available bandwidth, many are thinking only in terms of using live video to connect parties.

The next generation will be receptive to integrating virtual personalities into dispute resolution processes. Experience with digital buddies has shown that individuals will pour their hearts out to virtual persons who appear sympathetic and supportive. Avatars can be used not only to distribute information, but increasingly are capable of having an interactive conversation to identify parties' interests or to confirm points of agreement.

Perhaps contrary to stereotypes, women are learning to use technology in a manner that may make them more effective at technology mediated dispute resolution than men. In a virtual space where one's gender and appearance are unknown and cannot overtly influence a dispute resolution process, the technology mediated communication skills that girls are developing (as distinguished from the skills that boys are developing) may make them particularly effective at technology mediated dispute resolution.

Although changes are coming, the author believes that there is a place for mindfulness in technology mediated dispute resolution. Even though technology allows us and our children to communicate and transfer information at unprecedented rates, and even though children are learning to accept those accelerated communications as normative, it seems that there still is much to be gained by reflection. It will be interesting to learn whether our children will need as much real time as we do to realize the benefits of reflection. The fact is that everything may move faster for them, including mindfulness. But if mindfulness is a goal, then it will take increased effort to bring the next generation into that state of mind.

There is no reason, however, why technology can not be designed to encourage mindfulness. Whether the technology provides simple reminders to stop and reflect, or offers detailed pathways to guide parties to more reflective postures at opportune times, the same technology that is accelerating our communications may also offer the most effective route to mindfulness. But we have to keep in mind that it may be harder than we expect for the next generation to travel that path.

Although it sometimes escapes us, we know that e-mail communications create a record. We have seen the evidence, for instance, that college students will be more truthful when they understand that their remarks can be preserved and forwarded to others. Although e-mail may be displaced by a new technology in the not too distant future, an asynchronous communication medium that creates a record may be the most productive for addressing certain issues.

Several studies conclude that frequent communication is the key to creating strong relationships through technology mediated communication.

This suggests that the traditional dispute resolution model consisting of a few scheduled meetings for extended periods of time will not foster the desired relationships when a dispute resolution process relies upon technology mediated communication. A model that accommodates the desire, or at least habit, of being always connected will be more effective than one that requires the parties to convene.

We have entered the age of the micro-multinational and every individual with access to the Internet can create relationships, and disputes, worldwide. Dispute resolvers, who as a discipline have been paying attention to the need for cultural sensitivity, now must put that orientation process into overdrive. Dispute resolvers already understand that they must be sensitive to substantive issues as well as customs and procedures when participating in cross-cultural processes. They now must also be informed as to, and competent in, the technologies that different cultures have adapted for their most private and intimated disclosures.

It is highly unlikely that one technology will be used exclusively. We can see our children moving seamlessly between voice and text communications. We also will need to be able to identify, and move among, the technologies that are best suited for a particular type of communication. Some individuals clearly prefer text communication as opposed to face-to-face when it comes to personal or intimate communications. We need to be able to identify and accommodate those preferences.

The author wishes he could offer a complete, comprehensive description of what dispute resolution will look like in the near future. That will have to be left to others who are more visionary, or who are better educated as to the available technologies. The author is certain, however, that dispute resolvers must be very comfortable with technology if they are to serve the next generation. For that generation, technology is more intuitive, more natural.

The author hopes that this article represents the throwing down of a proverbial gauntlet.[290] Many dispute resolution theorists and commentators are oblivious to, uncomfortably avoiding, or simply not interested in, the dramatic changes that are occurring in the ways that children and young adults are living and communicating. Readers may disagree with the author's assertions as to the magnitude of those changes. But in their subconscious they (we) already are being nagged, and perhaps are soon to be haunted, by the fact that momentous generational change is underway.

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[290] Although I was excited by the idea of finding an actual gauntlet and hurling it downward, my brief search was unsuccessful and I have to be content with a proverbial one.

One thing is clear. There is much to be gained by listening to the social scientists that are studying how children are learning to interact, and actually interacting, through technology mediated communication. This article begins to explore, and attempts to apply, some of that research. We need to review, and do a better job of integrating, the results of social science studies.

This article makes strong assertions that dispute resolution processes will change as a result of technology. As today's children become adults they will demand that dispute resolution processes integrate the technologies upon which those individuals have come to rely. The author believes that there is a generational gap developing that reflects the fact that communication skills being learned by our children are being only partially integrated, at best, into dispute resolution practices.

One cannot say, however, that any division is purely and absolutely generational. There are adults who are embracing technology enthusiastically and whole-heartedly. There are adults discovering that they can create intimacy and trust through technology mediated communication. There are adults who find tremendous advantages to being available and connected anytime, anywhere.

The advantages of technology mediated communication soon may become apparent to most adults and these communication mediums then will become the preferred mediums throughout society. Individuals working in urban centers and technology based industries are finding themselves increasingly relying on technology mediated communication. As adults become comfortable with technology mediated communication, they may simply choose to address disputes through that medium because it now is the most convenient approach. Because adults are becoming comfortable with technology mediated communication, dispute resolvers must consider how technologies can be used to improve dispute resolution processes or create new processes.

Thus one can make the argument that technology mediated communication will become a more central component of dispute resolution because, at any particular moment, the parties may simply regard that medium as the most available and appropriate. But regardless of how adults are migrating towards technology, we also must consider whether the next generation is developing communication skills, and perhaps psychological and physiological characteristics, that will cause them think about and use technology differently. That generation may demand, or even introduce themselves, different approaches to dispute resolution.

IX. CONCLUSION

The options available for technology mediated communication always are expanding. The successes of software and hardware developers are coming so quickly that it is difficult for those of us outside the technology fields to stay informed. We can be forgiven for not taking the next step and asking how new technologies, technologies of which we may not even be aware (or at least not fully understand), can be used to enhance and improve dispute resolution processes. But that does not mean that we should not work harder to try to understand those technologies. At a minimum, we should reach out to technology specialists, as well as social scientists, for assistance in creating new "interdisciplinary models" for dispute resolution.

To the degree that dispute resolvers are not ignoring technology, we have focused almost exclusively on the question of how we can use technology to enhance our existing practices. We are not paying sufficient attention to the fact that young children are communicating differently than we communicate.[291] Insufficient energy is being dedicated to the question of how those differences in communication inevitably influence the way that those children resolve disputes. Cya.[292]

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[291] Clearly, there are exceptions. For instance, Professors Ethan Katsh, Janet Rifkin, and Alan Gaitenby at the University of Massachusetts are involved in numerous projects involving the intersection of technology and dispute resolution. Colin Rule has gone from co-founding onlineresolution.com to structuring online dispute resolution for e-Bay. Professor Ben Davis has worked tirelessly to create, expand, and improve the International Competitions for Online Dispute Resolution (ICODR), working with students to better understand how dispute resolution processes unfold online. *See* ETHAN KATSH & JANET RIFKIN, ONLINE DISPUTE RESOLUTION (2001); COLIN RULE, ONLINE RESOLUTION FOR BUSINESS (2002). The Dispute Resolution Section of the ABA's Online Dispute Resolution Committee and The Association for Conflict Resolution's Online Dispute Resolution Section are actively addressing online dispute resolution issues, but primarily the more pragmatic, immediate concerns.

[292] See you.