Telepresence Technology in Divorce and Separation

Author: Richard Wolman, Ph.D.
Cambridge Health Alliance
Harvard Medical School, Boston, MA
Email: drwolman@gmail.com

Author: Richard Pomerance, Ph.D.
Private Practice, Boston, MA
Email: rnpomerance@comcast.net

Abstract

This study examined user satisfaction of telepresence technology (Skype and FaceTime) between distanced parents and their children after divorce. Questionnaires and clinical interviews were conducted with parents and children. Results were over-whelmingly positive, with use of telepresence technology experienced as more natural, intimate, and satisfying than telephone contact. Findings held for children as young as age one, challenging the attachment theory notion (Garber, 2011) that young children are unable to feel attached through the use of telepresence technology. Nothing replaces physical presence. Telepresence technology will be so ubiquitous and advanced, however, that distance may become a minimal barrier to intimacy. Implications for divorce decrees are discussed, including the need for appropriate legislation and evaluation of telepresence technology in court removal decisions.

Keywords: Divorce, Separation, Virtual Visitation, Relocation, Court Decisions, Skype, FaceTime

Background

Over the past ten years, the use of telepresence technology, now available in such products as Skype and FaceTime, has grown exponentially, both in this country and around the world. Fifteen years ago, the boardrooms of corporations, law firms, and television studios used video conferencing to conduct meetings at a distance at a cost of many thousands of dollars per event. Today, a grandparent can talk face to face with a grandchild, or a soldier in Afghanistan can talk with the family in Des Moines, on an iPad or via Skype, for free, via nearly universally owned smart phones, computers, and tablets.

This technology is evolving at a rapid rate. A phone call from a loved one in the 1950s contained about the same information as a cell phone call today in terms of clarity, although, obviously, the portability has improved. Unlike the telephone, however, the increased bandwidth of telepresence technology has vastly increased the degree to which people can see, hear, and experience each other.

One telepresence technology application that has become controversial in recent years is its use with divorcing and divorced families. When the courts are faced with the responsibility of ratifying parenting plans for these families, they have often built in a directive about contact between parent and child when that parent is not physically present. Typically, the parenting plan would include provisions for telephone contact between children and the absent parent, either at the behest of the child or, in some cases, at particular pre-set times of the day, e.g., bedtime. Many parents have come to treasure that contact with the child for a chance to say good night, or I love you.

Those cases in which one parent wishes, or needs, to relocate for financial or career-improvement reasons, present particular difficulty because of the complaint that the courts are trying to substitute an electronic image for the 'real thing,' thereby ignoring the best interests of the child. Many states have now enacted legislation that enables the courts to order the use of new technologies to try to ensure that contact between the child or children and the non-custodial parent is not lost (Spatz, 2011; Welsh, 2008; Gottfried, 2003). For the last decade, court rulings have vacillated between opposing viewpoints on the matter. Some have permitted the court to allow a parent to relocate for more security and career opportunities and order the addition of virtual contact between the child or children and the left-behind parent. Other rulings have denied the relocation in the belief that the quality and potential of the child's relationship to the left-behind parent will be sacrificed, because, among other things, the technology will not compensate for the physical absence of the parent, and may become simply a conven-ient solution to one of the most difficult types of dilemmas the courts face:

> Family law courts throughout the country have issued orders requiring 'virtual visitation' which utilizes technology such as web cameras and other Internet tools to provide regular and visual contact between a non-custodial parent and his or her child. . . . Relocation is likely to be challenged when the non-custodial par-ent's time with the child would be compromised as a result of the move. Virtual visitation can be used as part of a compromise solution, allowing the child to relocate with the custodial parent, while still maintaining and fostering a relation-ship with the non-custodial parent. Consequently, virtual visitation may make it more difficult for a non-custodial parent to prevent the custodial parent from relo-cating (Spatz, 2011).

". . . In fact, Philadelphia Family Court Judge Robert Matthews applies virtual visitation beyond relocation cases and is one of the first judges in the country to mandate virtual visitation in all custody cases that come before him" (LaVasseur, 2004).

With the advent of home telepresence technology a decade ago, decisions from the courts in many states began to include the term 'virtual visitation,' with the orders including contact between parent and child via Skype (used here as a generic term for telepresence technology), and even articulating which parent would be responsible for buying the equipment (camera, computer set-up, etc.). Objections began to be raised

by separated parents that the courts were trying to mandate the substitution of virtual visitation for in-person visitation between parents and children. The issue, in Massachusetts and other states, became hotly debated in the legislature in reaction to complaints of alleged bias, often against fathers.

> In *Baker v. Baker*, a New York judge recently ruled that—as a condition of her planned move—a Long Island mother must allow her two children to communicate virtually through Skype. . . . Prior to the New York decision, other courts appear to have made similar rulings. For instance, Michael Gough, the divorced father of a then-four-year-old asked a Utah judge to require his ex-wife to allow him to use Skype to maintain contact with the child. This order led Utah to become the first state to adopt virtual visitation laws, in 2004. . . . Gough has become a strong advocate for . . . related legislation in several other states (Ramasastry, 2010, paragraphs 4, 9-10).

In 2002, Massachusetts Probate and Family Court Judge E. Chouteau Merrill granted Paul Cleri virtual visitation with his three children once they moved with their mother to New York. Cleri's lawyer opined,

> If the trend continues, it makes it almost a slam-dunk, I think, for the custodial parent to move. As Sacks and Thompson (2002) note, "Even if one accepts the Merrill ruling's dubious rationale, virtual visitation opens up endless opportunities for interference by custodial parents. . . . Despite the approval of many judges, legal experts, and women's advocates, this Orwellian Massachusetts ruling serves only to divide fathers from their children."

This view is echoed by Waldron (2005):

> "Virtual Visitation" . . . is an overblown concept that suggests that adding a picture to voice . . . via computer is comparable to face-to-face visitation. . . . It would be difficult to make a convincing argument that seeing each other on a computer monitor is comparable to a hug, or showing a baseball trophy on the screen is comparable to having a parent at the game (p. 352).

In his recent article, David Welsh (2008) summarizes how critics of virtual visitation argue that these new technologies will be and are being used to substitute for real parent-child interaction. In response, Welsh says, "States have responded to these concerns when drafting virtual visitation legislation. All four states with virtual visitation statutes specify that Internet communication is not a replacement for in-person parent time." Florida, Texas, and Wisconsin are prime examples of this language, and Utah authorizes virtual visitation only when 'reasonably available.'

Welsh concludes by suggesting that, "Legislatures should act to legitimize the use of virtual visitation by passing effective legislation establishing guidelines for when to use this technology" (Welsh, 2008).

The Problem

The debate about the usefulness of virtual visitation is increasing in intensity. Saini and Polak (2012) report that in Canada there has been a four-fold increase in the "past two years (2010-2012) in which virtual parenting time was sought, proposed and/or ordered. . . . and 80% of the 164 cases in which virtual visitation was ordered were relocation cases."

Advocates see the use of this new technology as a means of preserving parent-child relationships in separated families. Opponents view the practice as a slippery slope of parental replacement, making events such as relocation a foregone conclusion in conflicted divorce scenarios.

Amidst the plethora of opinion, there has been little actual research about the effects on families in general of the use of virtual visitation through the medium of telepresence technology. Many questions need to be addressed. For example, how widespread is the practice? Do families, and particularly children, enjoy and/or profit from this kind of electronic contact with a parent that they may not have seen in person for a long time? What is the overall effect of virtual visitation on parent-child relationships? Can this new kind of communication that includes sight, sound, and movement be used as a reasonable addition to visits with parents in divorce situations? Do people use this technology often or is it reserved for relocation and long-distance separation; and if it is used, what is the experience like for parents and for children?

Method

So that we could begin to investigate these questions empirically, the authors contacted the Honorable Peter DiGangi, First Justice, and met with him and the other judges from The Family and Probate Court of Middlesex County, Massachusetts, and obtained permission to begin our investigation. We then contacted the Honorable Paula M. Carey, Chief Justice of the Family and Probate Courts in the Commonwealth of Massachusetts, requesting the Court's support. We were given encouragement and the overall authority to contact, with their attorney's permission, parents, both custodial and non-custodial who had been divorced in Massachusetts. Our method for this initial phase was to ask these mothers and fathers to complete a questionnaire and/or participate in a clinical interview about the use of Skype with their children in their post-divorce lives.

We decided that it would be inappropriate and intrusive to the legal process to speak with any potential participants during the pendency of their divorce. Consequently, rather than interact with divorcing parents during the course of their litigation, collaborative law negotiations, or mediation, we contacted only families in which the divorce had been final for twelve months or longer.

Our total sample size was 70 individuals, 30 parents, and 40 children. The age range of the children involved was from one year to late teenagers, and the socio-economic sta-

tus of the families ranged from low to high. The parents were 60 percent male and 40 percent female; and the children were evenly distributed between male and female. In this study, it was not possible to determine the level of pre-, during-, and post-divorce conflict, but only ten percent had been involved in actual custody litigation.

Our questionnaire (see Appendix A) and clinical interviews consisted of the following types of questions:

- General demographics such as age of the parents and age(s) of the child(ren).

- Estimates of the geographical distance between parents and children and the length of time between visits.

- Some information about the subjective experience of the use of telepresence technology between parents, "Do you Skype with your estranged spouse? How does she/he feel about you and your children Skyping?"

- And as a corollary of the above, we asked, "Compared to a phone call, do you find the Skype call more or less engaging?" "Does it make you feel closer, further apart, or both?" "Do you sense the same is true for your child, and has he or she ever commented on this issue?"

- We asked if there were times of the day that seemed better than others did and whether the child's gender seemed to affect the interaction.

- Finally, in terms of the overall quality of the interaction, we asked, "Does Skyping allow you to experience your child's life more fully than before you used telepresence technology and, if so, how?"

Results

Thirty parents were involved, which is a relatively small sample. Nevertheless, the findings from this study are both interesting and instructive. Our general and most robust finding is that the attitudes and opinions are overwhelmingly positive. With almost no exceptions (see below), parents reported being in favor of Skype use in their post divorce families, particularly when parents and their children seek to maintain their relationships beyond the times they are physically present with one another.

Forty-eight percent of the responders in the study had been using Skype for three years or more, even when their children were quite young. Of the individuals who responded to the questionnaire and whom we interviewed, 100 percent reported having a positive experience with it. In our experience, people with a negative attitude, especially in the divorce world, are not shy about voicing opposition to any phenomenon in divorce with which they disagree, so there is a high probability that we were able to eliminate partici-

pation bias in the study sample by sending the questionnaire to a random selection of parents.

Fifty-two percent of parents have been Skyping for three years or fewer and of that group half have only begun using Skype with their children within the last twelve months.

Increased use of techniques to keep in touch with children is often precipitated by the abrupt separation that is part of the divorce process. Many of the parents we interviewed either had been familiar with the technology or learned it quickly. One mother of an eight-year-old daughter has been Skyping "for many years" three times per week for as long as one and a half hours per contact. Another parent lives five miles from his nine year-old daughter, but "there has been no physical contact for one and a half years." He has been Skyping twice a week for approximately one hour per contact.

Another consistent finding was in response to the question of whether Skyping is "more engaging and makes you feel closer." The answer was invariably, "Yes." One parent noted, "Video makes the difference. It is much more engaging." Another parent observed, "More engaging, closer, yes. The children would rather Skype with their grandparents and father than talk on the phone." And, finally, "Yes, much more engaging; more content than a phone—but nothing compares to in person."

We also found that there was no report of Skyping between ex-spouses, only between parents and children. This is an area in which a negative attitude toward Skyping surfaced. It may well be that the increased presence that the video conveys is more than the parents want to experience or re-create. One parent who had survived a vicious high-conflict divorce expressed concern about her ex-husband Skyping with their daughter: "He just wants a chance to look inside my house so he can criticize me."

Perhaps this reluctance also speaks to a perceived risk that, with increased and deepened contact, old animosities might flare up, and might explain why these parents avoided telepresence technology. However, those same parents still far preferred the virtual contact to the simple audio telephone for their children. Emails, texts, and voice mail, therefore, appear to be the portals of choice for the parents. But when it comes to the intimacy of parent and child, the increased availability of the other parent makes a big difference to the child. One child told a parent after a bedtime Skype, "Now I can go to sleep."

We understand that in high-conflict cases, the Skype process may encounter blocking or sabotage by the parent who is physically present. For example, appointments may be late or missed, Skype hardware or software may be inoperative, and so on. Further research can highlight what these difficulties are and how often they may emerge. In addition, from the questionnaires and interviews it was not obvious how much 'gate-keeping' each parent performed, although clearly, more parental involvement is required

with younger children. We did not find any specific mention by either parent of obstructive gatekeeping in our sample of likely moderate conflict divorce cases.

Another finding is that the actual time spent on the telepresence contact between parents and children is much greater than time spent on the telephone. For phone, the average call was eight minutes, while the average time for the video calls was thirty-two minutes. Routine half-hour or even hour-long contacts occurred in 20 percent of cases. We hypothesize here that this finding speaks to the ease and utility of the medium, and the fact that the experience is genuinely enjoyable. In addition, because there is more visual information available to the participants, along with auditory information, the kinds of interactions can be more robust and filled with activities like showing a school drawing, helping with homework, participating in a story line (like a movie), and becoming more engrossed in the stimulation.

Typical of responses was the remark of an eleven-year-old boy, "I really like FaceTime with my Dad. He helps me with homework especially Math, 'cause Mom is not good at it." Another child, a six year-old girl, said, "I don't miss my Mom so much when I can see her and talk to her whenever I want to." This sense of joy in the parents' availability appeared to be the main theme of the experience for children, and should be confirmed in future studies.

It may also be that this capacity to show, rather than just tell a loved person something about yourself or what you are doing is a form of communication fundamental to human beings' sense of 'being present with another.' If this hypothesis were supported through further investigation, it would speak to the power of the telepresence medium as far more potent than has been realized. It would constitute a true extension of the relationship rather than a poor substitute.

Finally, we also found that telepresence technology can be extremely useful in mandated physical separation between parent and child. The case mentioned above is of a father who lived five miles from his child and Skyped often but had no physical contact. This arrangement indicates that, in situations in which there is reason for the Court to prohibit physical contact for the safety of the child or children, Skype can preserve the possibility of a relationship without the threat of physical harm.

Discussion

We hypothesize that, all things being equal, the increased visual and auditory information between a separated parent and child can reduce anxiety and increase a feeling of safety for children in general and for children of divorce in particular. We further suggest that this new technology is superior to a single-channel communication by telephone and, in its evolution, may bring even more advantages in the future.

A useful way to understand the needs of children in separated situations is through the psychological lens of attachment theory (Ainsworth, 1979; Bowlby, 1988). One of the

axioms of that theory is that the transitional objects (Winnicott, 1953) that serve a child's needs during any separation, i.e., vacations, brief hospitalizations, divorce and more, need to be consistent with the child's level of development. A teddy bear may be fine for the younger child, while a favorite jersey or baseball cap may serve the same function in a teenager (although, many college-bound freshmen are careful to include a special stuffed animal in their school supplies!). Developmental psychologist Benjamin Garber is of the opinion that:

> If we acknowledge that an attachment object is a secure base which serves the purpose of emotional 'refueling,' then we can talk about less mature children's need for emotional fuel that is more frequent and which appeals to their more primitive senses (i.e., smell, taste and touch) whereas older kids, say grade school and beyond usually have the cognitive and emotional capacity to be refueled via media, and can enjoy a similar benefit via more advanced sensory channels (i.e., vision, hearing) and via abstractions (i.e., words, associations, and images). In this view, the best emotional fuel for any individual is likely to be the actual person who provides that fuel. [And, therefore,] . . . these little ones will get little or nothing from digital media contacts that serve the attachment system (B. Garber, personal communication, April 16, 2012).

This view of attachment in young children has led some theorists to propose that very young children also need a higher level of development and mental organization to appreciate and respond to "more abstract and visual or auditory media" (cf. Garber above; Garber, 2011).

We agree that any transitional object for a child during separation can and often does reflect the child's developmental level. Conflating the objects pertaining to separation, however, is quite different from the technology we are describing that focuses on presence, rather than absence. Skype and FaceTime are not objects, they are portals, like a phone, through which attachment can be activated and absence or presence can be experienced. They can, therefore, serve the attachment process in a positive or negative fashion.

Attachment theory is focused primarily on emotional bonding. The corresponding perceptual and cognitive development in children has not, in our opinion, been sufficiently appreciated. But as Bower (1966) pointed out in his classic experiments, "babies as young as two months are influenced by the real size and real distance of objects. Babies can organize and sort correctly most of the visual information an adult can. They have binocular vision and can use motion parallax: by moving their heads slightly they can judge by the relative motion of objects which one is closer." And as Spitz and Wolf described over sixty years ago, babies will smile at an adult when they are smiled at; and will also smile even when a three-dimensional mask is presented to them (Spitz & Wolf, 1946).

One of the fascinating and serendipitous findings of the study is that very young children respond as well as they do to the two-dimensional screen and treat it with the enthusiasm one would expect of older children. Recent research (Jowkar-Baniani & Schmuckler, 2011) has demonstrated that infants' capacity to correlate 2D images with 3D images is strong, overcoming the traditional view that depth perception is not available to infants when viewing a static 2D screen. Research on the infant's capacity to infer 3D objects from a 2D video screen is, given our findings, both timely and necessary.

With the increased information and animation of telepresence technology, it would seem that what had been a truism in the world of attachment theory may no longer be sufficient to describe the reactions of very young children to this medium. One mother, for example, told us about her one year-old son, Louis, in a follow-up conversation, after completing the questionnaire, with one of the authors (RP).

"Your colleague proposed that 'little kids need a certain level of maturity to profit from Skype contact.' I am not so sure. I am sure Louis absolutely tunes in to whoever is on the screen. He gives a big smile, seems to recognize a face. I propose that love comes through the box, even to little kids like Louis."

Also, one of us (R. Wolman, 2012 personal communication) reported a delightful 15-minute FaceTime session with his two- and a half-year-old grandson, (not a subject in the study) three thousand miles away, whom he has seen in 'real life' only a handful of times. Although anecdotal, this interaction was typical of many of the responses we obtained. "With accurate perception on the iPhone screen of his Grammie and Grampa, he treated us to a series of many flavored yogurt servings from the galley of his pretend airplane."

If we look at the use of telepresence technology from a developmental perspective, we are led to the following theoretical hypotheses:

A) For young children, even as young as Louis at one year, the increased bandwidth and, therefore, amount of information transmitted can be not only stimulating but also engaging. Connection between parent and child can be maintained through 'putting a face to the voice' and conveying smiles, facial expressions, and the like.

B) For older school-aged children, starting as early as first or second grade, in addition to the pleasant interaction with an absent parent, there is also the opportunity to engage in activities together such as doing homework, sharing a new skill on the piano, or at sports, and other activities. This may be especially true if the Skype line is left open over time, so that parent and child are not forced to perform for each other, but can relax and home in on each other when they are moved to do so.

C) For teenagers, the situation becomes more complex. As they begin to develop and mature emotionally and physically, teenagers are faced with the new demands of inter-

personal communication. All contact becomes suffused with competing demands of their social lives, their hormonally activated bodies, and their preoccupation with self worth, achievement, normal separation from parents, and more. Traditionally, the favored medium of communication for teens was the telephone, and many remember the hours spent on the phone with friends or with new and established passionate romances. This single bandwidth communication mode has now evolved to a broad spectrum. Teenagers can control how much or how little information about themselves, their emotions, and their thoughts, is communicated. They can simply use the technology suited to their particular needs.

Young peoples' overwhelming new favorite is texting: the brief messaging typed into a smart phone and instantly received by friends or acquaintances. Texts are hard for adults to intercept. And texting allows continual, rapid interchange, which allows for varying emotions and continuous learning, especially about social situations.

Some have decried this shift from conversation to the electronic text/mail that is most prevalent with teens and increasingly with their parents as well. In her recent piece in the New York Times, Sherry Turkle (2012) describes a 'new way of being alone together' and quotes a businessman who says he doesn't want to interrupt his colleagues with conversation or be interrupted himself, "I'd just rather do things on my Blackberry." Turkle goes on to describe how teenagers of today have lost the ability to have conversations, preferring the electronics of texting to in-person discussions or even the telephone, which many consider 'too personal.' "Texting and e-mailing and posting [as on FaceBook] let us present the self as we want to be. This means we can edit. And if we wish to, we can delete. Or retouch: the voice, the flesh, the face, the body. Not too much, not too little—just right."

We agree with Turkle when she says that "human relationships are messy and we clean them up with technology." What she may have missed, however, is that the need to control the input and the output of information and stimulation, in the interest of self-protection, is especially crucial for teenagers. When the telephone ruled the world of communication at a distance, the amount of excess stimulation was limited in comparison to today's overload of mental and physical stimulation. We think it is important to recognize that while Skype is a 'warm and communicative' medium, texting is distancing and 'cool.' This distance and protection afforded by texting is a critical part of the development of young adults. With less direct contact, teenagers are able to experiment with intimacy and difficult conversations about sex and love by cooling down the flow of information—all the way from email to texting if necessary—to stay connected but to also stay safe. In addition, when parent and child, or child and intimate friend need closeness, Skyping is there. The use of these technologies does not alleviate the need for personal contact and learning the skills of conversation. Rather, the technologies can help prepare for real-life relationships. Pilots in training first use simulators to limit pain and damage. We believe young people use these new media similarly, learning to select from the spectrum of responses and engage the other person appropriately.

Suggestions for Future Research

Our study is, clearly, only a beginning, and should be expanded to larger, more diverse populations. Our population was primarily Caucasian, middle class individuals from the Northeast United States. New investigations should include a wider variety of ethnic and racial participants so that we can achieve greater generalizability of the findings.

It would also be useful to study the relationship between the effects of Skype on children in divorce situations, compared to children who experience other forms of parental separations, e.g., travel by a parent, deployment in a military family, hospitalization of a parent, and more.

With respect to the present sample, and others like it, we need to know the relationship between ages of children from divorce families and their Skyping behaviors and experiences. It would also be useful to examine the role of conflict resolution versus perpetuation of conflict in the Skyping families, i.e., does the new technology encourage conversation between parents in the interest of resolving difficulties, or does it reinforce preset attitudes of resentment and disappointment?

The Future of Telepresence Technology

The prospects for telepresence technology are very bright. Skype alone has reached the mass adoption stage. Its use grew by 50% percent in the last year. It is as though everyone in New York City started using Skype in January 2012. Skype now has an active user base of nearly 245 million people. Other platforms, such as Apple's FaceTime and Google's Video Chat, are also showing significant gains.

High-water marks: *Signed In Skype Accounts* over time
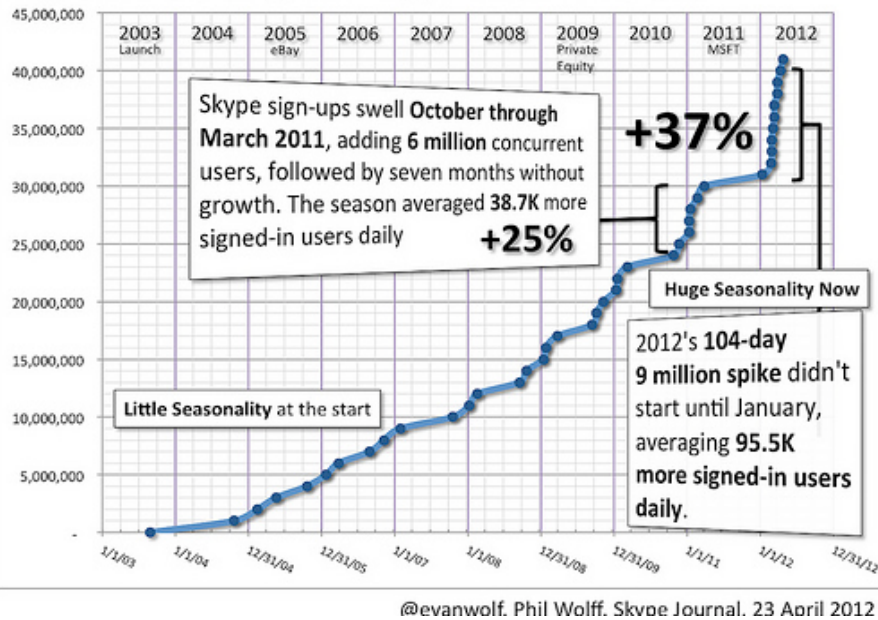
@evanwolf. Phil Wolff. Skype Journal. 23 April 2012 [1]

Research and commercial applications are also evolving at high speed. The visual and auditory qualities of the devices are growing, and we are now starting to hear of innovations (at the laboratory stage) like 'virtual touch.' If implemented, these advances will mean yet another, perhaps major, increase in the sense of presence. In the culture at large, there is no question that this form of communication is rapidly becoming accepted and ubiquitous as a result of its easy availability, technological advance, and low cost. Any number of situations already profit from having the capacity to be in touch with others at a distance in such a lifelike and easy-to-use format.

In the legal world, depositions and examinations of witnesses unable to come to Court occur on a regular basis. Judge Carey, who endorsed this research, told us that often, for the business meeting of the Judges from around the Commonwealth, Skype is the most efficient form of communication. With busy schedules and increasing workloads, professionals from all sectors are turning to this form of interaction more and more. Telemedicine and psychotherapy by Skype have joined the world of commerce for the information richness and cost effectiveness of telepresence technology.

Our focus on the use of this technology in cases of divorce, child custody, and the necessary separations that invariably accompany these experiences was driven by the concern expressed about the fear that 'virtual visitation' would be used by the Courts as a substitute for real-time contact between parent and child. In all the cases we reviewed, we found no evidence of this substitution. The Courts in many states appear sensitive to the issue of replacement of parents by technology. Nevertheless, we agree with Welsh (2008) on the need for the legal and mental-health communities to keep a

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[1] From SkypeJournal.com. Reprinted with permission from author.

watchful eye on this issue, as telepresence technology becomes ever more a part of the developing child's interaction with a separated parent.

There is, to be sure, is nothing like the real thing. That being said, given the fast rise of virtual communication, the concept of the totally 'absent parent' may be fading more rapidly than anyone might have thought possible even five years ago. We found that parents often embrace the telepresence form of communication with their children when they are separated because of the enhanced quality of interaction and for the opportunity to be more embedded in the context of their children's lives. Giving up (at least) half of the time a parent would have been spending with his or her child as a result of divorce is painful enough. The pain appears to be mitigated, though, by the use of modern technology that keeps parents close to their children and enables children to feel the presence of their parents in a more active and alive fashion.

In the short- to medium-term future, evolving technology will mandate an even further closing of the gap between near and far, present and non-present. We briefly describe this technology not for its 'gee-whiz' value but because it is specifically relevant to the issue of parent child separation and both the problems and the solutions it will generate.

Telepresence technology is developing at a startling rate, similar, if not greater than that of the personal computer in the 1990's. A feature that seems ten years away becomes reality in two or three. Already we have 'Skype on wheels,' a notebook-size screen, or an off-the-shelf tablet, on a self-propelled frame, moveable and dockable via the Internet, looking like a human stick figure with a square head. This configuration allows exploration and a sense of context far beyond the usual fixed, single-face Skyping format. Use is moving from businesses toward the private sector: prices have dropped drastically, to $2500 recently, and with another such fall will likely find increased personal adoption.

More telepresence innovations are coming. Better transmission technology promises life-like and life-size pictures in the next several years, at little or no increased cost. Refinements in 3-D technology, e.g., viewing without glasses, suggest likely implementation of 3-D in the same time frame. *Holographic* presence may well be common in five to ten years. For example, Queen's University in Canada is developing the Telehuman Holographic Presence Pod (Telehuman, 2012). Other technology still in the labs will allow various forms of virtual touch and smell. Further down the road, perhaps fifteen years, telepresence likely will be incarnated in a physical representation of the distanced family member, possibly controlled by thought rather than keyboard or joystick (New Scientist, July 5, 2012). Cynthia Breazeal's work on emotional robotics at MIT promises android-human relationships with empathic capacity (Breazeal, 2012). The use of such technology with divorced families seems plausible.

As a group, these advances will be transformative. Five years from now there will be increased confusion as to the fundamental meaning of psychological presence or absence. There will be no excuse for a distanced parent *not* to be involved with his or

her child, on a daily or even intra-day basis. The child, the parent, and perhaps the Court will simply expect it. A parent will not engage in removal so easily with the intent to deny the ex-spouse parental involvement. Removal issues before the Court are likely to take on new meaning and afford new possibilities.

Telepresence will never substitute for real-world presence, but with it, both parents can substantially remain in any child's life on an ongoing basis. New decisions from the Courts will have to reflect an appreciation and understanding of these new possibilities. It is our hope that this research will begin to address the process of laying the foundation for a revised view of attachment theory, and of the real-life attachments and separations in the world of the developing child.

Imagine, some time in the not-too-distant future, child and distanced parent with these technologies 'virtually' in the same room, not meeting formally but simply spending time, as they might if in the same physical space. Imagine a distanced father virtually present on the sidelines of his son or daughter's soccer game, or the two of them just 'hanging out.' We wonder, and can begin to imagine, how a child will experience a virtual good night kiss.

Some Takeaways

- We found overwhelmingly positive feedback about telepresence technology. Our conclusion is that the use of this technology is inevitable and likely unstoppable. Luddite views exist but, in comparison with the passionately negative 19th-century criticisms of Mr. Bell's telephone, are relatively minor. The question is not whether telepresence technology works and pleases people. It does. The larger questions engendered by this easy acceptance of the technology are: Is it too pleasing? Can it be easily addictive? What is the responsible use of its power?

- We believe that removal petitions involving telepresence technology should be evaluated on a case-by-case basis, keeping in mind the particular situations and personalities involved. Scrutiny should be on the child's unique needs, and the possibility of bad faith by either the custodial or the distanced parent. Evaluation of these factors might fall initially to the Guardian *ad Litem.*

- The courts should stay educated on the rapidly evolving telepresence technologies. This oversight will allow judges to see what is practical in the short term for divorcing families, whether local or distanced. It will also prevent weighty decisions from being placed on shifting technological sands. History is a guide: decisions made a decade ago based on the cost, viability, and efficiency of telepresence technology seem irrelevant today. We expect even faster development of this very family-relevant technology over the coming years.

Appendix A: Survey Questions and Summary of Responses

1. Are you male or female? What is your age? How many children do you have and what are their genders and ages?

>   Parents: 18 male, 12 female
>   Children: 20 male, 20 female; age range from 1 to 19 years

2. Are you familiar with Skype, or other video communications technologies? (We will use Skype to refer to all video technologies in the questions that follow.) If so, (a) how long have you been Skyping? (b) How often do you Skype? (c) About how long, on average, are the calls?

>   Familiarity: 90%
>   Average time been Skyping: 18 months
>   Average frequency: 1 time per week
>   Average call length: 13 minutes

3. Roughly how many miles are there between you and your child or children, and how long is it between physical visits?

>   Average distance: 22 miles
>   Average time between visits: 1.5 weeks

4. (a) Do you also Skype with your estranged spouse? (b) How does she/he feel about you and your child(ren) Skyping?

>   Skyping with estranged spouse 100% no

5. Have you found that the Skype calls are better at (a) a particular time of day or (b) day of the week?

>   Best time of day: variable responses from convenient time of day to meal time or bed time

6. Do you find that the age and/or gender of your child influences the quality of the Skype calls? How?

>   Influence of age and gender of child: 100% none

7. (a) Compared with a phone call, do you find the Skype call more or less engaging? (b) Does it make you feel closer, further apart, or both? How so? (c) Do you sense the same is true for your child or children? (d) Has your child ever commented on this?

      More engaging: 100%
      Feel closer: 90%
           And then feel the separation more keenly: 65%
      Children feel the same: 75% yes, 25% never said

8. Does Skyping allow you to experience more fully what your child's or children's world is like? If so, how?

      More fully experience child's world: 100% yes

9. What advice would you give other parents who are considering using Skype as a means of maintaining contact with their child or children?

      Advice to other parents: 100% use it immediately

10. We would like to explore some of these questions more fully with you. Would you be willing to spend 10-15 minutes on the phone, or Skype, with one of the members of our team? If yes, we appreciate the help, and we'll be in touch.

      Further contact: 100% yes

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Richard Wolman is an Affiliate of Boston Law Collaborative, and can be contacted at 99 Summer Street, suite 1600 Boston 02110   email: drwolman@gmail.com

Richard Pomerance has written extensively on family relationships (smartrelationshipdecisions.com) and can be contacted at rnpomerance@comcast.net