CYBERPSYCHOLOGY, HUMAN RELATIONSHIPS, AND OUR VIRTUAL INTERIORS

by John A. Teske

Abstract.   Recent research suggests an "Internet paradox"—that a communications technology might reduce social involvement and psychological well-being. In this article I examine some of the limitations of current Internet communication, including those of *access, medium, presentation*, and *choice,* that bear on the formation and maintenance of social relationships. I also explore issues central to human meaning in a technological culture—those of the history of the self, of individuality, and of human relationships—and suggest that social forces, technological and otherwise, have increasingly eroded our social interconnectedness and even produced psychological fragmentation. Finally, by considering the psychology of privacy, subjectivity, and intimacy, I look at the historical and developmental processes of internalization by which we construct the "virtual interior" of mind. Understanding this link between human meaning and technological culture, in the form and pattern of our virtual interiors, may help us to see opportunities as well as dangers for the growth of our humanity, our ethics, and our spirituality.

Keywords: close relationships; individuality; internalization; Internet; nonverbal communication; privacy; social fragmentation; social history; technology; virtual reality.

If all thinking is really a kind of conversation, it is never a small challenge to convert it into a medium of pure words, and much of the feeling, the embodiment, and the lived reality behind it is likely to be missed. We are fully embodied minds, and our writing and thinking via other media are extensions of this embodiment, of our relationships with other human

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beings, rather than vice versa. Indeed, to believe otherwise may not only court deep alienation but risk the most horrible of immoralities. Speech is not ideas and words alone. As Oliver Sacks put it, "It consists of *utterance*—an uttering forth of one's whole meaning with one's whole being—the understanding of which involves infinitely more than mere word recognition" (1985, 77). So, too, though at further separation in space and time, even unto lifetimes and worlds apart, is writing (as well as other symbolic media), which is both the source of its power and the source of its limitations and its risks.

Like it or not, our lives at the beginning of the third millennium are connected to an expanding network of people, of places, and of virtual and institutional realities that are products of human intentions and human-constructed worlds of material and information. We live with a lurking anxiety of being overwhelmed, engulfed, even obliterated. We are bombarded with information at ever-increasing rates of speed (Postman 1992) and with learning curves that seem only to accelerate, so that we increasingly feel that the mental demands of modern life have left us, in Robert Kegan's prophetic title, *In Over Our Heads* (1995). This does change how we understand ourselves, a process addressed over the last decade by Robert Jay Lifton in *Protean Self* (1993) and by Kenneth Gergen in *The Saturated Self* (1991), with their descriptions of human fragmentation, of a chaotic whirlwind of new social encounters and the concomitant "multiphrenic vertigo" of partial identities. How do we go about doing the prioritizing that finite lives require? Or do we just reduce, "gate," ignore, and learn to better disattend or even dissociate? Do we just find more ways to focus on our beleaguered selves, shrinking our individual, bounded egos from what is other, becoming less open to what is dissimilar or alien? We all need simplifying assumptions in order to live, but such assumptions lead to various kinds of fundamentalism, including scientism, which only further fragment us from each other and even from ourselves. Such disattention, focusing, and simplification readily lead to a shrinking of our definitions of what we consider relevant, of that for which we hold ourselves responsible, as Edward Sampson has pointed out (1991).

The present focus is on the psychology of the Internet, an increasingly important part of our technologically constructed world that is also understandable as part of larger historical processes. The Internet is largely a technology used for interpersonal communication, and it can widen our world and make it more inclusive. But it can also shrink our sense of relationship and personhood. The subtext, then, is really about communion and communication and their relationship in this "wired" world, where we can step beyond the embeddedness of traditional lives into a world perspective of standard time, of a universal dating system, of a worldwide web, but at no small risk to our embodied minds, to our hearts, to our very integrity as persons, to our sense of having a place, a home in the world (cf.

Tom Rockwell's article in this issue, pp. 605–21). How does this communication technology affect our sense of ourselves, our bodies, our relationships, and even our location in space and time? If our very integrity, the content of our character, is formed by enculturation, by our place in a social nexus, might this be fragmented by the de-individuation of high Internet use, especially during the course of development, especially during the crucial years for the formation of identity and intimacy? What about our privileged place in this high-tech world? Who has access to the technologies of communication? Cinematic productions like *Il Postino* (1994) remind us of the importance of even "snail-mail" institutions like the postal service in linking societies together, and it may be that half the world's residents have yet to make a telephone call. Even for those with access to technology, residents of developing countries may be more likely to use cheaper cellular phones than personal computers, and financially constrained students in the United States may be limited to the use of public access terminals. Finally, as we consider our wholeness as persons, our souls, the "uttering forth of one's whole meaning with one's whole being," it may be useful to keep in mind a distinction between information and communication, between the transmission of messages and the maintenance of interconnectedness.

There is much about our interconnectedness, our interdependence, and our relational lives that is important, even central, to our sense of ourselves as integral, living, whole persons that may become increasingly unavailable as we rely more heavily on electronically mediated communication. In what sense may electronic communication limit the possibility for a friend to make you feel better just by virtue of her physical presence, for an intimate to light up your world with a smile, or for a child to make you laugh just because the sound of his laugh is so contagiously funny? Alternatively, might Internet communication open up worlds of possibility both for a wider range of communication not limited by the space and time of locality and for a wider and richer sense of ourselves and our possibilities for interconnectedness, for communal and relational life, and even for the experience of our own interiors? Cyberpsychology is an emerging field already burgeoning with new empirical data addressing a wide range of questions about human responses to information technologies, including the effects of electronic communication on the form and content of our interconnectedness. The broad range of issues addressed can be overwhelming, even in a field in which we are all, in some sense, neophytes. Because of this, there is much that is still *terra incognita* (unknown territory), much about which we simply have no definitive answers. The present exploration is intended only to be an initial foray into this broad new area.

Some initial touchstone studies have generated controversy about the effects of Internet communication on interpersonal relationships, and I examine these in the context of the social psychology of interpersonal

communication, in terms of what is present as well as what is absent, what might be enhanced, and what might be degraded. Then I look at the current status of our sense of individuality in terms of its historical roots, our sources of self, and the impact of contemporary technological developments, via both our interdependence and our social fragmentation, upon our individuation and its changing shape. Finally, I look at the potential impact of current technologies of interpersonal communication upon our understandings of privacy and of our own subjectivity and what their role might be in transforming the virtual interiors that are our minds, our hearts, and our spirits.

THE PSYCHOLOGY OF INTERNET USE

Social commentators in the early 1990s warned that widespread use of the Internet would produce a "nation of strangers." Sherry Turkle (1995) warned of the potential for the destruction of community and of meaningful social integration, and Cliff Stoll (1995) suggested that this form of communication could lead to reduced commitment to and enjoyment of real friendships. Nevertheless, dark forecasts have always been part of the initial response to new technologies, from telegraph to television. More optimistic commentators, such as Howard Rheingold (1993), have argued for the positive benefits of electronic communication in providing opportunities for social relationship unrestricted by location, in which normal "gating" categories such as appearance, ethnicity, gender, education, and socioeconomic categories are obscured, opening the way for a commonweal of greater pluralism, diversity, and individual liberty. The empirical research emerging at the end of the century provided a more balanced picture and some improvement in the clarity by which we might understand the interactions among causal factors that may produce varied results.

Some survey data from the mid-1990s, reported by James Katz and Philip Aspden (1997), seemed to suggest that the Internet might both augment existing communities and provide a real medium of friendship formation. Their sample consisted of two hundred users from an October 1995 random telephone survey of twenty-five hundred plus another four hundred subjects from a national random sample of Internet users. Their evidence for the augmentation of existing communities consisted of self-reports that 88 percent did not change other time spent with friends and family, up to 50 percent used the Internet to contact family, and 31 percent of long-term (17 percent of recent) users participated in Internet communities. Nevertheless, they did not provide comparisons with nonusers, any assessment of the degree of participation via the Internet, or any comparison of changes in the quality of more direct interactions. The evidence that the Internet may be a medium for friendship formation consisted in the 14 percent of subjects reporting at least one Internet contact considered a

"friend," 7 percent reporting eventual direct meetings. While the authors extrapolate to a possible 2 million new friendships formed via the Internet, one wonders whether this might actually represent an overall increase or decrease relative to more direct contact. As we shall see, such friendships may represent a very different kind of relationship, more limited and less emotionally satisfying (as in the report of a graduate student who dropped a whole circle of gaming "friends" with the click of a mouse). While it is clear that the Internet can be a medium for friendship formation, the extent of even numerical and temporal enrichment is unclear without comparative data. Such "friendships" may also well be quite other than the rich interdependencies we traditionally associate with this label and may risk the erosion of existing relationships.

   The more methodologically sophisticated study of Robert Kraut, Michael Patterson, Vicki Lundmark, Sara Kiesler, Tridas Mukopadhyay, and William Scherlis (1998) actually provided computers and Internet access to 93 Pittsburgh households (169 subjects). They also measured variables associated with preexisting characteristics that might otherwise lead people to Internet use and therefore play a causal role in outcomes. Starting two panels in subsequent years (1995 and 1996), with follow-ups at 12 and 24 months, respectively, they were able to gain causal leverage by correlating a variable at time 1 with an effect at time 2, thereby providing statistical controls for regression to the mean, unreliability, and covariation between outcome and predictor variables. Mathematically removing these covariates provided a statistical control for influences that might affect both variables, like prior social involvement and psychological well-being, and therefore increased the validity of causal inferences about the outcomes of Internet use.

   Kraut and his colleagues (1998) provide evidence for an "Internet paradox"—that a technology designed for communication may reduce social involvement, psychological well-being, emotional investment, and, by competing with other aspects of informational and relational life, replace fuller relationships with weaker ties and even affect established relationships. Such a fast-growing technology could also seriously exacerbate a thirty-five-year decline in civic engagement and social participation (Putnam 1995). By reducing social involvement and physical activity, television watching has certainly contributed to this trend, but the evidence suggests that the dominant home use of the Internet is for interpersonal communication, like the telephone in its social role. Moreover, increases in phone tolls, population density, social mobility, and wider social networks also add to Internet use. Unfortunately, Kraut and his associates' study provides some evidence for a replacement of proximity-dependent strong ties of frequent contact, deep affection, obligation, and broad content—which buffer stress—with weaker and more superficial bonds, infrequent contact, and narrower focus, leading to decreased interdependency and poorer outcomes.

Kraut and his colleagues find time-related decrements in indices of both social involvement and psychological well-being, consistent with a negative causal impact of Internet use. (1) Greater use of the Internet is associated with subsequent declines in family communication. (2) Subjects with higher extroversion and wider initial social networks tended to use the Internet less. Nevertheless, holding race, age, and initial size of social circles constant produces a statistically significant correlation between greater use of the Internet and subsequent declines in local social circles. (3) Initial loneliness does not predict subsequent Internet use, suggesting that its use is not *because* of loneliness. Nevertheless, after partialling out variability associated with wealth, gender, and initial loneliness, Internet use does correlate with subsequent loneliness. (4) Results are similar for depression: While it does not predict Internet use, if we factor out initial depression, demographics, and indices of stress and social support, greater Internet use correlates with subsequent depression. (5) There is also a greater use of the Internet by adolescents, developmentally at greater risk, who show larger declines in social support and increases in loneliness.

Kraut and his associates conclude that, while the Internet *can* be used to support strong social ties, many on-line relationships, especially new ones, are more likely to be content-limited weaker links, and what friendship formation does occur does not counteract the overall declines. Even the data of Katz and Aspden (1997) suggested that only a small percentage of users made a friend via the Internet over the course of two years. Such contacts are likely to be limited, less frequent, unavailable for tangible favors, and otherwise not embedded in the day-to-day context of conversation. Such relationships may be convenient, even entertaining, but, lacking both the context and the embodied basis of emotional support, they may be at the cost of more involving relationships.

Despite wide acceptance of Kraut and his colleagues' findings by psychologists and the media, Katelyn McKenna and John Bargh (2000) provide a more critical analysis of what is still largely unknown ground. There are real issues of information quality on the Internet and an information overload that often results in restricted attention. Social identity, social interaction, and relationship formation are also likely to be different on the Internet, but McKenna and Bargh suggest a more balanced view of the gains and losses, including the independent value of electronic communication, and the varied impact of these disembodied, nonlocal, and asynchronous connections on "real-life" relations. Given the exponential growth in Internet use and its movement toward becoming a "vital utility" like the telephone (64 percent of users in a recent poll considered it "a necessity"), it is important to consider its real differences from other forms of communication and the limits of our current knowledge.

McKenna and Bargh indicate that while the Kraut et al. study is an improvement upon impressionistic and survey research, it has its own limi-

tations, in terms not only of the representativeness of the sample and the lack of a true comparison group but of the actual size of the findings, despite their "statistical" significance. The sample consisted of Pittsburgh families with high school students and adults on community boards who tended to have large social circles to begin with. While the design did allow for some statistical controls, there was no non-Internet comparison group. More important, the results may have been merely adaptational: All of the subjects were "newbies" developing computer experience and Internet facility for the first time, so we have little idea about which changes might have occurred in response to *any* change in domestic patterns. Finally, the statistically controlled correlations were actually rather small. Mean reductions in social network were from 24 to 23 persons, and changes in loneliness and dysphoric mood were both on the order of 1 percent.

The findings of other surveys (Katz and Aspden 1997; McKenna and Bargh 2000) that more than 50 percent of users actually met an Internet contact and that more than 20 percent found romantic relationships suggests that there really are no simple main effects of Internet usage and that interactive effects may depend as much on individual differences, reasons for use, developmental status, and the characteristics of available social resources. Indeed, the negative outcomes found by Kraut and his associates might have been produced by a small number of overusers in combination with the problems of adapting to a new communication technology. Of course, it may be that the introduction of a new category of easy choices for communication, entertainment, and distraction, enabling some avoidance of the anxieties of psychological growth and development, might be a problem particularly relevant to adolescents. McKenna and Bargh argue that there are some major differences between Internet and face-to-face communication involving the Internet's greater anonymity, lessening of the role of physical appearance and physical distance, and enabling greater control of the time and pace of interaction, but that the effects of these differences may vary with individual differences, goals, and needs.

Internet communication can often be accomplished with a great degree of anonymity, one of the major sources of deindividuation documented in the psychological literature (Deiner 1980). The consequences can include weakened self-regulation, reduced long-term planning, tendencies to emotional reactivity, and a reduced awareness of the responses of others. Greater impulsive and disinhibited behavior, such as greater bluntness, hostility, and aggression and a reduced ability to form consensus, have all been documented during Internet use. On the other hand, anonymity can also foster greater self-disclosure and intimacy and even enrich our usual role identities. A whole literature of research on nonverbal behavior shows greater intimacy of conversation with less nonverbal immediacy (Argyle 1975), and it is quite possible that the Internet could enable people to develop closeness more quickly by virtue of their making more intimate disclosures

earlier in a relational history. Nevertheless, intimacy also requires a certain reciprocity of disclosure (Altman and Taylor 1973), and problems of timing and mutuality can be exacerbated on the Internet. The decrease in the usual constraints on expression also makes room for more playful self-presentation, and a multiplicity of roles and subselves may buffer stress and produce better health and life satisfaction (Linville 1985), as may more legitimate forms of disclosure (Pennebaker 1990). Nevertheless, this multiplicity may reduce the sense of having a coherent self, contribute to greater dissociation and to compartmentalized fantasy selves, and worsen the "multiphrenic vertigo" of our information-saturated selves (Gergen 1991). How the consequences will balance out is as yet still unknown.

The reduced role of the interaction "gating" produced by physical appearance and physical distance also is likely to have mixed consequences. Normally, appearance has a major role in relationship formation, especially for intimates (Hatfield and Sprecher 1986). While one hopes that a greater dependence on similarity of values, interests, or even conversational style could produce deeper and more durable relationships, one must also worry that, given a tendency for strangers to behave with less modesty (Tice et al. 1995) and to present more idealized selves (McKenna and Bargh 2000), the Internet is more likely to enable both deception and self-deception. This is particularly true given the greater likelihood of relying on inaccurate folk theories of interaction where "what we think" has a greater influence on our judgments than usual (Wilson 2002). Some of the same issues are likely to impact upon the reduced role of physical proximity, which allows new interaction possibilities, and it may be that we can more readily discover the familiarities and similarities so important to attraction (Byrne 1971). Alternatively, this may make it difficult to see how we develop the new interests that are so often part of psychological development and have to be negotiated in long-term relationships. Again, we simply do not yet know the long-term consequences.

Finally, McKenna and Bargh (2000) address the greater control over the time and pace of interaction on the Internet. The atemporality and asynchronicity of interaction on the Internet means that two people do not have to be present at the same time, can edit their responses, and have greater freedom from interruption. Each of these may have mixed consequences. Trading control for presence is likely to reduce much of the mutual vulnerability of interaction, but social penetration theory (Altman and Taylor 1973) suggests that growing relationships require disclosure of increasingly revealing communication; the vulnerabilities may merely be delayed. Moreover, bodily presence is important for shared emotion, for mimetic forms of communication, for feedback about the timing and speed of conversation, and for coordination of activity, movement, and physical intimacy. The Internet also fails to provide many of the normal signals of inattention or boredom and other cues by which we regularly modify our

responsiveness to our partners. How these considerations play out carries us again into unknown territory.

There is no doubt that it is possible to form healthy, face-to-face relationships mediated initially, and later in subsidiary ways, via the Internet. Initial contact can occur without the usual gating of physical appearance and proximity, and it is possible to discover shared interests and values with a certain degree of safety, and at one's own pace. These relationships need not be of lesser quality than any other relationships and may progress to off-line, face-to-face relationships with just as much (perhaps even more, given the initial gating differences) potential for being deep and long lasting. There are some documented increases in loneliness and depression attributable to Internet use, but these may be both minor and short lived for most users. There may, nevertheless, be some risks for overusers, particularly including the developmental risks among adolescent users. It is certainly easy, in violation of disclosure reciprocity norms (Altman and Taylor 1973), to say too much too soon, to not calibrate oneself sufficiently to an other. Alternatively, it is also possible to form relationships both more rapidly and more deeply than might have been possible without the Internet.

While we have focused so far only on an interchange between some of the flagship studies of Internet use, there is a burgeoning literature already building upon the findings and concerns of these studies. Patricia Wallace's groundbreaking *The Psychology of the Internet* (1999) extends a wide range of psychological research to Internet interaction, addressing issues of impression formation, role playing, group dynamics, aggression, attraction, pornography, addiction, altruism, gender, and speculations on the next generation of Internet use. New journals, like *Behavior and Information Technology*, *Computers in Human Behavior*, *Cyberpsychology and Behavior*, and the *International Journal of Human-Computer Studies*, are increasingly regular sources of peer-reviewed empirical research in this area. Nevertheless, there remains a whole catalog of questions about how we understand and relate to other human beings, and ultimately to ourselves, that may have greater historical impact on human values than do the short-term impacts addressable by contemporary studies. Such questions include our understanding of the relationships between privacy and sociability, the formation and maintenance of relationships, and a whole realm of nonverbal behavior, including our understanding of our very embodiment.

To what extent does Internet usage alter the relationship between privacy and sociability? Privacy can be understood within the theoretical context of human territoriality, which, while evolutionarily rooted in mammalian territoriality, does not require physical presence, can involve multiple locations, and can be extended to abstract relationships (Altman and Taylor 1973). It also plays an important role in the viability of social systems, mediating status, relationship, social unit formation, and even

scheduling and the regulation of interaction (Vinsel et al. 1980). In mediating social access, privacy is important both to withdrawing from social contact and in withholding information, as in functions like solitude, intimacy, anonymity, and reserve. All of these functions may be altered by the paradoxical combination of physical privacy with psychological disclosure made possible by electronic communication. Moreover, while spatial density may be reduced by physical seclusion, our experience of crowding is more strongly related to the social density of interaction with strangers, understood psychologically in terms of overload, reduction in perceived control, and experienced helplessness (Schmidt and Keating 1979). Research is clearly needed to explore changes in these mechanisms with increasing dependence on the Internet.

To what extent might increasing Internet usage affect not only with whom we interact and the kinds of relationships we form but also how we ultimately understand ourselves as social beings, including the incorporation of close relationships into self-understanding? In the case of close relationships, as we have previously indicated, the Internet is likely to reduce the effects of normal gating mechanisms like proximity and physical appearance. Nevertheless, if physical embodiment is important in negotiating a close face-to-face relationship, and if synchronization and reciprocation are important characteristics for developing those relationships (Clark and Reis 1988), the Internet leaves clear lacunae. Moreover, it may be that issues of timing and limitations on both frequency and diversity of interchange, as well as a restriction to symbolic encoding, are likely to seriously reduce the wide-ranging interdependencies that are part of developing close relationships. Relationships always exist in dialectics between autonomy and intimacy, novelty and predictability, and disclosure and reservation (Baxter and Montgomery 1996), all of which are likely to be mediated differently via electronic communication. This is particularly true under Ellen Berscheid's (1983; 1994) account of close relationships as involving a causal sequencing of actions, including reciprocal and mutual emotional reactions, reactions heavily dependent upon nonverbal signals. Given its current dependence on symbolic language, Internet communication is likely only to be subsidiary to the face-to-face reciprocity and matching of emotional and psychological investments important to the development of trust, including the extensive, even bodily, self-with-other representations that are so important to intimacy (Aron et al. 1991).

What is primarily missing from Internet communication, and upon which most of emotional expression and relational interdependency depends, is nonverbal communication. Using tone of voice, facial expression, gestures, bodily position and movement, touch, and gaze, we communicate through hundreds of channels simultaneously (Archer and Akert 1977; 1998). We convey attitudes and relational status, including intimacy and closeness, communicate information about personality, and

regulate verbal interaction, even providing metalinguistic modification. Not only does nonverbal communication provide most of our social architecture, but it may actually meet physical needs, as in the cuddling, feeding, and diapering of infancy, the excitements and social negotiations of adolescence, and even adult needs for touch, reassurance, and affection. Moreover, not only is mimesis an important part of communication, of shared emotions, reactions, and feelings, but it may have been an important dramatistic stage in the evolution of language and continue to be the envelope within which more symbolic forms of communication have meaning (Donald 1991).

As we are a symbolic species, much of the evolutionary, social, and historic power of our minds is in our capacity both to communicate with language and to use our symbolic capacities to construct a world beyond immediate experience. Indeed, it may be that the coevolution of language and mind and our capacities to shape the minds of subsequent generations are what is behind our emergence as *Homo sapiens* (Deacon 1997). Symbolic constructions enable us to escape our immediate world, to substitute, transform, refer, propose, displace, invent, and reflect upon more directly experienced events. We build a virtual reality of meaning and symbolic actions that have indirect, social, and systemic force upon the world in which we live. Nevertheless, in our daily expressions of power and intimacy and of the relationship-maintaining aspects of communication, we still are embedded within a circle of embodied behavior that remains largely nonverbal, however shaped, modified, and understood by the symbolic functioning of our minds. However explosively developed, the latter capacities are constructed upon and beholden to a living scaffold of bodily and social interrelationships for which they are, in some sense, fragile cultural and technological prosthetics. The finer-grained, moment-to-moment negotiation of impressions, identities, and intimacies on which our interior lives depend are still rooted in a longer heritage. This heritage includes the proxemics of territoriality and personal space, the kinesics of affect display and adaptation, the regulation of attention and social interaction through eye contact and behavioral exchange, and the signals of emotion, power, and intimacy that may ultimately motivate much of our symbolic production. Because much of this operates unconsciously and automatically, learned over years of socialization, it is easy for our attention to be drawn elsewhere, and there may be many layers of strategic deception both of others and ourselves, which, under the rapidly changing exigencies of human culture and history, is not always to our advantage (Wilson 2002). The greater emphasis in Internet-based relational communication on linguistically and symbolically accessible cultural categories for understanding relationships may not portend well for those that require substantial electronic support.

The negotiation of self may be even more problematic. As George Herbert Mead pointed out long ago (1934), there is always a role played by others in the construction of a sense of self, as the meanings of our gestures are incomplete without the appropriate response from another. Hence, there is a vulnerability in negotiating our sense of self, well illustrated by Sartre's *No Exit* (1954). Unfortunately, while our self-appraisals are often congruent with our interpretation of the reflected appraisals of others, they often fail to match their actual appraisals (Swann 1987). Given our selective interaction, the likelihood of egocentric biases in interpretation (Greenwald 1980), and a wide variety of presentational strategies (Goffman 1959; Sampson 1991), our capacities for self-deception are only magnified by the minimal feedback and the greater ease with which we might break off unwanted interaction on the Internet. I may feel less vulnerable, but only by virtue of more facile self-deception. True intimacy, as well as a deeper sense of personal integrity, may simply not be possible without painful self-disclosure, naked and vulnerable in the face of another.

Finally, it is the sense of bodily presence, even in the absence of communicative action or intent, that Internet communication lacks. Wittgenstein once said that the human body is the best picture of the human soul. It may be that one of the greatest risks of the Internet is in fostering the illusion of a disembodied soul. Not only are the deepest metaphysical problems about the relationship between the public, outer place of bodies and the private, inner one of minds, but our greatest human experiences and our deepest intimacies connect them. Despite the possibilities for mutual masturbation that technology-mediated communication may provide, intimacy in its most basic physical form does require physical presence, from gaze and touch to affection and sexuality. Do we matter enough to another person, and he or she to us, to simply *be there*, physically present, embodied, even if we do nothing else than lend the support of our presence? What greater love is there than that expressed in religious traditions in which a God becomes incarnate?

I also suspect that we often try to deny our mortality by denying our physicality, our embodiment—a spiritual problem (as I argued in Teske 1999) that is likely to be exacerbated by a communicational medium for which physical absence is, in some sense, a reason for its existence. We can feel less vulnerable, less anxious, perhaps in part because we make less apparent the vulnerabilities of our bodies and our anxieties about the deeper vulnerability of our mortality. Recent research in terror management theory by Jamie Goldenberg, Tom Pyszczynski, Sharon McCoy, Jeff Greenberg, and Sheldon Solomon (1999) finds that, particularly for subjects higher in neuroticism, making mortality more salient results in finding the physical aspects of sex less appealing, and thoughts of physical sex increase the accessibility of death-related thoughts. This may help us understand conflicting thoughts about sexuality, so frequently regulated and romanticized,

and also our motivation to deny our embodiment and bodily presence. This is an area ripe for empirical research and may have lessons for all of us.

So where are we in understanding the cyberpsychology of electronically mediated human relationships? Despite the media-touted Internet paradox of reduced social involvement and psychological well-being, it appears that the small overall effects may be prominent only with particular populations and under particular uses and may represent short-term adaptational difficulties. We nevertheless have explored some of the ways in which electronic communication might affect social interaction and identity by virtue of its greater anonymity, the reduction of appearance- and proximity-based gating, and the greater control of timing, and posed a range of questions about privacy and sociability, relationship formation and maintenance, and the absence of nonverbal communicative channels for intimacy, interdependence, and even self-understanding. We asked about the meaning of bodily presence and the disembodiment of electronic communication and their possible relationship to more general anxieties about physical vulnerability, sexuality, and mortality.

Some broad areas of concern, particularly about the longer-term historical effects of increased Internet usage as a "vital utility," involve its potential role in the developmental shaping of adolescents and young adults, its place in negotiating important social boundaries between self and other, its effects on how we understand our embodiment, and its contribution to overall increases in human anxiety, to which I will return shortly. These broad concerns can be summarized under categories of *access*, *medium*, *presentation*, and *choice*. A range of social and psychological effects may be produced by differential *access* to electronic communication, that is, the availability of equipment, technical knowledge, and the prioritization of time for appropriate development and use of Internet capacities. I have raised concerns about the limitations of a *medium* that is almost completely symbolic, tending toward nonlocality and asynchrony, and its exclusion of many of the bodily, nonverbal, and mimetic channels that have important scaffolding functions for symbolic communication, as they have both evolutionarily and historically. While the Internet may increase our flexibility, it may also have far-reaching effects by virtue of its effect on our *presentation* of self. It may restrict the limits of what we are likely to become conscious and therefore bias us toward culturally available folk theories of self and other and toward idealized and deceptive ways of thinking about ourselves. I have noted issues about the effects of *choice*, under circumstances of potentially wider information availability and the related information overloads. While the Internet may make more information potentially available, our own temporal and cognitive finitude requires value-based prioritization, and an increased capacity for filtering, personalizing, and customizing information may allow us to more greatly restrict

ourselves to contacting like-minded others who share similar and increasingly specialized interests and reduce the range of what we consider relevant to our lives. We thereby may avoid contact with many members of even our own communities, to say nothing of the larger human community, and this is particularly problematic in an age of globalization.

HISTORY AND INDIVIDUALITY

It is important to see the place of the psychological issues so far addressed in a wider historical context, not only of technological developments per se (see the article by Willem Drees in this issue, pp. 643–54) but also of changes in human psychology and self-understanding. It is the latter, particularly the emergence of individualism in its contemporary cultural form, that will be essential to any understanding of human values in a technological age, itself produced by and interactive with many of those historical changes. It is the contention here that individuality has a particular history (indeed, one influenced by philosophical and theological developments over the last several millennia) and that its modern variant has increasingly emphasized an autonomy that is part and parcel of increased isolation and social fragmentation. While this pattern prefigures contemporary technological developments, it is likely to be exacerbated by expanded uses of electronic communication and contribute to an historical pattern of increasing anxiety.

In his seminal article "Why the Self Is Empty," Philip Cushman (1990) moves us toward a historically situated psychology. He argues that our understanding of "self" is a kind of theory that changes over time. Rooted in historical shifts from religious to scientific frames of reference, from agricultural to industrial economies, from rural to urban populations, and from communal to individual and subjective values, our current theory is of self-contained individuals, internally controlled, bounded from others, and masterful in manipulating the external environment. The work of Roy Baumeister (1986) has also provided a wealth of detail on historical and cultural changes in identity, from the conferred identities of the Medieval era, to an emphasis on choice post-Reformation and a proliferation of occupational and ideological choices after 1800, through the romantic passions and ideas of heroic struggle in the nineteenth century, to the ties between identity and personal ideology in the twentieth. With declines in the guidance of traditional religion, with urbanization and the rise of capitalism, with the demystification provided by science, and with the discovery of unconscious motivation, twentieth-century individuals have been left overwhelmed and helpless. Cushman illustrates a two-thousand-year history in movement from the communal, outward-looking, non-sexually conflicted self of Aeschylus' *Orestia*, through the tortured, confused, but immortal "inner self" of Augustine's *Confessions*, to the cynical, confused

narcissism of F. Scott Fitzgerald. One might add the more frightening twentieth-century dramatism of Pirandello's "Someone is living my life and I don't know anything about him." In our current cultural era, our celebrities include actors famous for playing that they are someone else, using a script written by yet another.

The twentieth century saw an acceleration of the process by which individuals became increasingly secular and secluded, forsaking even the isolated nuclear family. In the United States, households of seven or more persons dropped from 35.9 percent in 1790 to 20.4 percent in 1900 to only 5.8 percent by 1950; during the same period, households of two persons increased from 7.8 percent to 28.1 percent and single-person households from 3.7 percent to 9.3 percent (Cushman 1990). Moreover, despite the increases in the potential for communication concomitant with greater population density and the contribution of improvements in medical technology to health and life span, the scale of community has increased from a manageable level of approximately two hundred to the unmanageable scale of populations in tens of thousands. At the same time, the loss of community, family, and tradition has continued as we attempt to resolve the resulting alienation with the consumption of nonessential goods, experiences, and the construction of "life-style enclaves" (Bellah et al. 1985). Recent census data (reported in *Newsweek*, 28 May 2001) documents an extension of social isolation into the latter twentieth century: Married households with children dropped from 40 percent in 1970 to 24 percent in 2000, and the percentage of single-person households doubled in only four decades, from 13 percent in 1960 to 26 percent in 2000.

Cushman argues that we have increasingly come to see the individual self as the locus of salvation, emphasizing values of self-actualization, growth, and transformation. Nevertheless, he argues that this has been driven by the emergence of an empty self in the middle classes, empty by virtue of the very losses produced by social fragmentation, and driven by a postwar economy.

It is a self that seeks the experience of being continually filled up by consuming goods, calories, experiences, politicians, romantic partners, and empathic therapists in an attempt to combat the growing alienation and fragmentation of its era. This response has been implicitly prescribed by a post–World War II economy that is dependent on the continual consumption of nonessential and quickly obsolete items and experiences. In order for the economy to thrive, American society requires individuals who experience a strong "need" for consumer products and in fact demand them. Such an economy requires individuals who have an uninterrupted flow of money and a continual motivation to spend it. The complex interrelatedness of social change, political forces, and cultural forms has somehow accomplished this through the dual creation of easy credit and a gnawing sense of emptiness in the self. (Cushman 1990, 600–601)

The experience of inner emptiness is complementary to, and magnified by, the growth of a vast self-improvement industry, encompassing fashion,

cosmetics, diet, preventive medicine, and even popular psychology and popular religion. It also may be reinforced by psychotherapeutic practices that help to perpetuate the conception of self as autonomous, bounded, and masterful, which contributes to our experiences of emptiness and fragmentation. These are also expressed in a number of contemporary ills, including the absence of a sense of personal worth, the absence of a sense of personal commitment, the attempt to fill the emptiness with food or embody it by refusing food, the constant seeking of artificially induced emotional experiences from drug abuse to the virtual realties of entertainment (capacities expanded exponentially in the digital and home-computing revolutions), and chronic consumerism. Cushman also suggests that our absence of personal meaning can be expressed in a hunger for spiritual guidance, including pathological forms of "possession," in cult membership, and in seeking charismatic political leaders, unethical therapists, or controlling romantic partners.

Edward Sampson (1988) argues that the central cultural paradox of our time is that the very self we are trying to construct may contribute to the erosion of our ability to produce it. The healthy self in our era is expected to function in a highly autonomous and isolated way. To function in this way requires the development of an ability to be self-soothing, self-loving, and self-sufficient. However, the development of such an ability requires a very nurturing early environment full of attention and empathy. The problem is that well-bounded, ambitious, and self-serving adults may be unlikely to make the sacrifices necessary to provide that level of nurturance. Therefore, we are left with an awareness of a dichotomy between our outward presentations and our inner sense of self which produces a sense of personal fraudulence, a sense only concealed by our public masks. We clearly must worry about how increased levels of electronic communication might both be symptomatic of such a paradox and contribute to its exacerbation.

There are also some real empirical warnings about the consequences of these historical and cultural processes. Jean Twenge's (2000) meta-analytic summaries of trait anxiety show significant large increases in both children and American college students across the latter half of the twentieth century. Twenge's study summarizes research conducted between 1952 and 1993 on more than 40,000 college students and 12,000 children, so the results are particularly compelling. She finds, for example, that typical schoolchildren in the 1980s showed more anxiety than did child psychiatric patients in the 1950s. She attributes the increase in anxiety to decreases in social connectedness associated with higher divorce rates, social isolation, and decreases in interpersonal trust, suggesting a down side to the challenges and excitement of increased autonomy. She indicates that with continued decreases in social connectedness there are also likely to be in-

creases in problems for which anxiety is a predisposing factor, such as de-pression, substance abuse, and stress-related physical illness.

Christopher Lasch warned about a "culture of narcissism" a generation ago (1978), the dynamics and consequences of which are increasingly im-portant to understand in the context of their potential acceleration by the technologies of information and communication. Michael Lerner, in his *Politics of Meaning* (1991), also points out the tendency, in a highly indi-viduated culture, to interiorize our problems and treat them as individual rather than as part of a larger cultural and historical process to which we contribute. In his *Spirit Matters* (2000), he also argues that if we take the possibility of spiritual transformation seriously, we can change this pro-cess, but not just by our individual choices and actions. It may be that it is in an emancipatory understanding of our spirituality and its open-endedness that we can learn different ways to think about ourselves not as isolated individuals but as part of larger human projects that require our presence—require seeing each other's faces, hearing each other's voices, and being parts of each other.

PRIVACY, INTERIORITY, AND SPIRITUALITY

How has our particular historical and cultural version of interior, subjec-tive, and personal life, emerging from changing distinctions between pub-lic and private and currently wed to different forms of technologically supported interiorization, exacerbated a problem for spirituality? The prob-lem is in the denial of physicality, of embodiment, and of the very biology upon which so many of our spiritual capacities depend. It is in seeing spirituality as disembodied from the world of material creation, almost by definition, rather than being dependent upon and beholden to the very evolutionary, historical, developmental, and necessarily quite embodied lives within which the symbolic virtual realities of mind and spirit are con-structed (Teske 1999; 2000; 2001).

Psychologists Kenneth Gergen (1991), Rom Harre (1984), and John Shotter (1984) have argued that human personhood is a social and sym-bolic product, that to be a self is to be in possession of a certain kind of theory, and that we are socialized to produce a certain kind of identity by accounting for our actions in terms of that theory. Nevertheless, our struggles to do so can sometimes make the limitations of that theory ap-parent. The social practices and technological media within which we struggle may sometimes press us in the direction of frenetic elaboration within the parameters of the extant theory but may, on occasion, enable that theory to be modified or transformed. Within our contemporary North American model of the self, for example, we can strive to under-stand ourselves as having rich interiors but struggle with the mundane commonalities cultivated by the shared consumption of mass media. We

can value consistency between inner and outer versions of ourselves but still see the value of role specificity and impression management. We can stress the importance of personal boundaries but still understand the values of interdependence and shared subjectivity in close relationships, even in boundary violations such as gossip, betrayal, or codependency. We can value self-possession yet regularly be motivated to lose ourselves in work or absorptive forms of entertainment or experience, even to the point of self-escape (Baumeister 1991). We regularly experience ourselves as unique—socialized to pay attention to what differentiates us from each other—and then struggle with the resulting alienation, ignoring the vastness of what we share. Finally, we think of ourselves as unitary and autonomous, ignoring the global levels of social, institutional, and economic interdependency behind even the clothes we wear, the lenses through which we see, and the utensils with which we write. How is the use of such a theory enhanced, and how might it be threatened by the growth of electronic communication? What are the alternatives?

Cross-cultural research in both anthropology (Geertz 1973; Heelas and Lock 1981; Schweder and Bourne 1982) and social psychology (Sampson 1988; Markus and Kitayama 1991) has demonstrated a sociocentric-egocentric variation in conceptions of persons, individuality, and the boundaries between self and other (Teske 2000). Edward Sampson (1988) presents evidence that an "ensembled individualism" is actually more common worldwide than the "self-contained individualism" of contemporary Western culture. The alternative is the other end of a continuum emphasizing connectedness over individuality; flexible interdependence rather than a bounded, unitary, and stable independence; a focus on accommodation to collective social roles rather than to the expression of unique, private personality; and an external and public connection to social context rather than an internal and private separation from it (Markus and Kitayama 1991). As Sampson (1988) points out, while the latter view may be a product of Western cultural development, it cannot have produced the building of cathedrals, the emergence of the scientific community, or the political unification of continents, since, by defining freedom as internal control, it tends to conceal the deep and overdetermining interdependency that produces most human action. Unfortunately, and perhaps paradoxically, while electronic communication in its many guises may enlarge our web of actual interdependency, the increasing personal-computer-based use of the Internet is likely to involve a more elaborate construction of our sense of privacy and whole new worlds of personalized, individual interiorization. The risk is that it will produce further isolation and fragmentation, even to the level of internal dissociation.

Concepts of privacy and internality vary widely across different cultures, and it is instructive to see the dependence of changes in the understanding of what constitutes psychological internality, particularly in the

emergence of the "self-contained" individuality of European and Anglo-American cultures, upon historical changes in the construction and use of privacy. Georges Duby (1988) indicates that prior to 1500 the understanding of privacy was domestic rather than personal, and it was the household that was dominant in the experience of private life. For most of history, individual solitude was a rarity, sufficient to merit censure, as in the insult "monophagus" used in the ancient world to refer to one who ate alone. In the Medieval era, most households consisted of a single room, and seating was on benches rather than individual chairs. Whole families, including children, servants, and even animals, slept in the same bed. It is difficult to imagine how one might develop a sense of personal privacy or interiority if one is virtually never alone in anything like the modern sense, being in full view of others in the domestic as well as the public sphere. It was likely considered dangerous to be outside the company of others and unthinkable to voluntarily go anywhere alone. A "secret" would be shared with one's household, a vestige of which we retain in excusing the failure to withhold confidences from the "marital pillow." The *Oxford English Dictionary* notes that the first use of the word *self* is not until 1595. Even notions of private life through the turn of the last century seem to have been domestic rather than personal, so the idea of a private sphere, separate from one's domestic partners, is a relatively recent cultural innovation. It appears that the personal, private, interior notions of personhood upon which our contemporary sense of self and even of our spirituality depend are likely to have developed only as wealth and personal freedom enabled an elaboration of private, interior spaces and their extension into the metaphors by which we construct psychological interiors. The emergence of "internal states" is then a social and intellectual product, constituted within a symbolic "virtual" rather than a physical space, which, however dependent upon individual biology, is not coterminous with it (Teske 2000). Indeed, one of the central issues in psychological and therapeutic discourses, to say nothing of philosophical ones, is about the boundaries between this semantic space and the world "outside."

Recent shifts in the architecture, understanding, and use of privacy for individualized entertainment, personal computers, and electronic communication might ultimately bear on shifts in our understanding of individuals and their psychological interiors. Currently, most middle-class college students grow up with individual bedrooms, and to preserve what solitude they might still have, students tend to know their roommates' schedules as well as their own. The architecture of our intimacy has become more complex than it was for most of human history and is for most of the world: Not only is there a distinction between communal public spaces and domestic ones, but there is a more variegated range of architectural levels within these spaces. Not only are there quite anonymous public

spaces and semifamiliar spaces outside of one's own community or neigh-
borhood, but there are distinctions of street, yard, open porch spaces, and
even interior household spaces. Within the architecture of a middle-class
North American home, intimacy can be graded by architectural enclosure,
from the semipublic space of a foyer to an often rarely used formal living
room, a family room, and a kitchen eating area. It is often at the kitchen
table that intimate family discussions occur, and the status of "member of
the family" may be temporarily assigned to a guest at that table. There
may be a den, a study, a workshop, or a sewing room, semiprivate spaces
often tacitly restricted to adult members of the household. Finally, there
tend to be individual, private bedroom spaces for all but the marital couple,
though they may be compensated by a larger space or a private bathroom.
Even within a private bedroom space there may be ways in which rooms
are partitioned for varying levels of privacy or concealment, from an en-
trance area to the hidden recesses of desk drawers or dressers. This is the
physical architecture of interiority, an interiority that may also be affected
by variations in bodily adornment, thought and emotional expression, be-
havior, and even experienced senses of bodily boundaries or personal space.

Issues of property, location, and individual symbolic expression have
likely been aspects of the symbolic construction of privacy since the begin-
ning of human domestic culture. Nevertheless, developments in electronic
communication provide a plethora of new virtual spaces, some of which
are extensions and elaborations of previous constructions—witness the vir-
tual windows, files, desktops, toolkits, wastebaskets, and other iconics of
the expanded symbolic interior provided by home computers. Some of
these elaborations of virtual and symbolic interiors may involve the viola-
tion, renegotiation, and reconstruction of previous boundaries between
self and not-self, self and other, and the various levels of intimacy, privacy,
or even isolation. They may also involve the invention of new sets of
boundaries and the creation of radically new kinds of virtual spaces (which
are, in effect, interior or exterior, depending on how they may be shared
with others) with new conventions for their construction, maintenance,
and further elaboration. The elaboration of mutually accessed virtual spaces,
of chat rooms and other synchronous forms of communication, and of
listservs, newsgroups, "blackboards," "bulletin boards," or other asynchro-
nous forms are all cases in point.

Some of the more interesting questions are how these proliferating forms
of electronic communication, accessed by users from places of solitude,
might have an impact on our sense of intimacy, on how we construct the
boundaries of self and other in relationships, and on how we understand
our own virtual interiors as we multiply and elaborate them. What is
interior and exterior to one's body when one is absorbed in the virtual
reality of an interactive computer game? Is this a public or a private expe-
rience? What is interior and exterior to a close relationship if you can say

things to someone on the Internet that you cannot say in person? There is also the possibility of new boundary violations of all sorts, from the hijacking of mutual fantasies to delusions about off-line interactions and even the construction of false memories of what is communicated by either self or other. What is interior and exterior to self when our Internet expressions take on the character of journal or diary entries, from which an intended reader might be distracted, disattend, be unresponsive, or misunderstand, and for which confidentiality and anonymity are not vouchsafed by any of the usual mechanisms? What about material for which we ourselves may have limited later access, readily hide from ourselves, or lose in a virtual library for which formats, media, and access codes change rapidly? Are our relationships with self and with others deepened or made more shallow? Are they made more accessible or less? Are they, or can they be, used in ways that can enrich our sense of integrity, meaning, purpose, and focus in our lives, or do they inevitably lead to incoherence, fragmentation, and isolation? Finally, what is the bearing of these developments on the historical processes of interiorization that may be central to spiritual or religious life and to the ontology of human existence, human consciousness, and our capacities for self-transcendence?

As I have argued extensively elsewhere (Teske 1996; 2000; 2001), the integrity of self and spirit are not givens but fragile achievements that depend on our membership in larger relational and communal wholes for the construction of individuality and internality. Our ability to construct and live in symbolic virtual realities is central to our spirituality (Teske 2000). Both our capacities for language and the contents of our inner thoughts are inescapably social, scaffolded by socializing agents and internalized in ways that can change across history and social practice (Luria 1976; Vygotsky 1978). Such processes are no less crucial to our character and to our spirituality than to our identity.

The hopeful possibility remains that increased use of the Internet and other forms of electronic communication, while risking further isolation and alienation, may also enable us to expand our interiors in more inclusive ways. Theologians like Wolfhart Pannenberg (1982) address the spirituality of interiorized dynamics, and Karl Rahner (1978) addresses the internal horizon of possibility that is so important to our relationship to the broader mysteries of human life. Regular daily contact with a wider and more diverse network of other human beings, however much it may require the existential renewal of more direct vocal and physical contacts and embodied action in an ontologically objective world, may be part of a broader interiorization. To the extent that Internet usage can reduce our obsessions with unique, egocentric individualities or reduce our belief that we can exhibit autonomy outside of our extensive interdependency, it may provide a greater awareness of the symbioses we share with the real, objective, external, social nexus of our species and even of our planetary ecology.

Cushman and Peter Gilford (2000) warn of a mistake that can easily be exacerbated by electronic communication, digitized entertainment, and our absorption into unproductive virtual realities, that of equating subjectivity with political freedom. The illusions of expressive subjectivity are a luxury for most of our species, for whom "the existential perils that trouble the elite are eclipsed by real perils of survival and damage control" (Smith 1994, 406). If our spiritual and religious concerns are other than egocentric delusions, they are about real bodies in real places with lives that may be excruciatingly finite. Questions about the construction of our interior lives, about our subjectivity, and about our deepest values are incomplete without attention to how they are exteriorized, how they are directed to others, and to what is finally, ultimately, and inescapably other, or even Other.

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