

## Abstract

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There is perhaps nothing more critical to society today than communication. Because we now live locally and globally at the same time, we need communication to translate between the two. And to help us conduct all the commerce and interaction that turns the world on a daily basis. But besides playing its role in our economies and systems, communication is what binds people. It is what keeps our society healthy and sane. It's how we maintain our relationships, and how we make new friends. How we extend trust, as well as how we maintain it.

To sustain communication today we depend on technologies. The internet, wireless, phones, and computers—these and the many more devices whose ever-expanding web of connectivity has become the very fabric of our culture. Now that everywhere is nowhere and everyplace is no place, we're all equidistant and immediate. Wired or wireless, we're connected in ways that have never before been possible.

And yet we seem to ache more than ever to connect with people. For all our investments in communication technology, the paradox of our time is that our means of connection have become the condition of our separation. Through cell phones and email, chat rooms and message boards, IM and texting, our relationships are becoming fragmented by the very media we use to maintain them. More connected now than ever, we long for real connections.

This project is an investigation of technologies used for communication and of the practices we develop around them. It is a look at how we use media to get things done, to coordinate our activities, and to maintain our relationships. It is also an attempt to construct a pragmatics of mediated interactions, as a way of understanding the ways in which interpersonal and social aspects of communication undergo transformation when mediated by technology. Unlike other approaches to communication, and to an extent unlike many approaches to technology, I have tried here to examine mediated communication as a form unto itself, as social technology. I have chosen this direction out of a conviction that the best path to grasping technology is through an understanding of how human and social practices use it. Technology transforms the social just as the social anticipates its technologies.

Over one hundred and fifty years ago the telegraph ripped communication from the physical world, enabling with a lightning stroke the transmission of electric signals, and thus, our ability to talk without seeing each other. It was more significant than the industrial age, but we didn't know it then. Since then we have learned not only how to talk over the telephone but how to talk in text, in emails, in chat and in IM. We have learned how to maintain relations of all kinds through our networking technologies. And a wide range of activities—economic, dating, work, educational, financial, and so on—are increasingly affected by the new forms of interaction and communication that technologies themselves make possible.

We have entered an age of communications. The culture of technology is no longer defined by information and information processing. It's defined by connectivity,

relations, and communication. What marks this culture, from our perspective, is the manner in which it is producing new proximities. The very connectivity provided by technologies today transforms our access, immediacy, and presence, to one another. It also transforms the temporal rhythms by which we stay in touch and conduct our immediate interactions with one another—as well as the longer term and persistent relations that are so important to our sense of cultural membership and social belonging.

As we disembed traditional practices from physical contexts, and conduct ever more of our activities through mediating technologies, we create new practices. We try to integrate technologies into our relations so that they can be involved in the production of meaningful interpersonal and social encounters. But technologies not only transform immediate exchanges (phone calls, emails, messaging), they also redefine the kinds of continuity we have with one another. The ribbon of time on which our relationships and our social institutions unfold is no longer analog. It is digital, multi-tracked, multi-plexed, and sometimes deeply out of synch. If the reproduction of values requires face work and face commitments, and if trust and reciprocity belong to the world of co-present interactions, what might the consequences be for a society that is turning increasingly to technology for its reproduction? What happens when the face disappears? When all that is left of it is a Cheshire grin, and an digital one at that?

If the question concerning technology and addressing itself to society is “how does technology increase our power?” then the issues emerging from our profound adoption of communications technologies are only beginning to crystallize. This project will hopefully make some progress.

## **Main Arguments**

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We live in an age of communication. Communication is the problem and the opportunity addressed by a great deal of technology design and development. But because communication is an interpersonal and a social phenomenon, technology issues must be approached with a particular appreciation of human and social factors.

The organization of societies today requires effective global communication between diverse and far-flung social and cultural systems. Only through technical mediation are we able to maintain the flows of commerce and information required by the world-wide interdependence.

Technologies of communication become the means of production, or production format, of communication. Their use in communication is not transparent. In fact, technologies introduce new contingencies and context into communication. Analysis of communication and interaction in society today needs to account for the transformative effects of mediation.

Technologies are rational by design, and in use, they rationalize human activity. Human communication and interaction, however, are neither rational nor designed. The difference between the technical and the human shows up in technology at what we call

the “interface.” In our case, we will consider this not just a user interface, but a social interface. It is social because it translates communication (messages, content) while also facilitating the subtle and tacit exchange of interpersonal acknowledgments. The latter, though they don’t “say” anything, reproduce our relations.

Social interface issues generally involve ambiguities of communication, intent, outcome and so on. These ambiguities result from technology’s mediation of practices in which individuals are normally able to address and resolve ambiguities as they come up. It’s at the social interface where the distinction between communication’s content and participants’ relationships becomes an issue, because the technology that’s good for transmitting content may not be good for reproducing relationships.

The implicit purpose of communication is to motivate a listener (or recipient) to do, or understand, something communicated. Thus the use of technology extends *and* limits the very power of communication. It extends our ability to access and connect, but limits our ability to communicate and bind. Repercussions can be seen at all levels of society, from individual and interpersonal to macro-social.

Our study of communication technologies will borrow from pragmatics, which is branch of linguistics that emphasizes the “how” of what we say (in addition to the “what”). A pragmatics of mediated interaction would thus emphasize the production and performance of mediated communication and interaction, focusing on the practices developed around connectivity technologies.

To function, technologies must map to human action just as humans must grasp and relate through technology. The greater the transparency of one domain to the other, and the greater the transitivity of actions from one through the other, the more effective their interface.

From the perspective of the network, we function as nodes through which communication flows. In short, we’re transitive to the net’s communication flows, and our participation (our availability and presence in the network) is as important to it as it is to us.

All experience is situated in time and place. But communications technologies lift communication and interaction from the here and now that grounds face-to-face interaction. This dislocation of temporality from its situatedness in the world is one of the fundamental operations of mediation.

Indeed, communications technologies are as much about time and temporality as they are about distance and space. Synchronous media permit direct communication in real time. Asynchronous media permit communication only through use of a recording medium (e.g. text), and not in real time. Both intervene in the temporality of our relations.

Because communications media enable us to stretch our relationships across time and space (by framing the possibilities of our interactions), they inform and even produce our *proximity* to one another. These proximities involve rhythms of interaction, activity coordination, ways of communicating, and ways of offering or protecting our availability

to each other. They put us into a kind of virtual immediacy with respect to our access and presence to each other. We become virtually equidistant to one another.

Proximity, commonly measured as a physical field in which persons are distributed in space, also unfolds temporally, as duration. We can think of proximity as a distribution of relations in a spatial sense, and an intensification in a temporal sense.

Unlike physical proximity, whose distances are extensive, or spatial, the distances that characterize temporal proximity are intensive. They can be described as having qualities (not quantities) of speed, duration, acceleration, rhythm, and synchronization.

To this end, a critical part of our inquiry into the impact of communication technology rests on the assumption that we, as individuals, sense and pursue some level of synchrony in our interactions with one another. We will argue that it is through a temporal synthesis, and not just through understanding made possible by language, that action binds us to one another. It is in creating and producing shared time and times that interaction is also a coordination of action. And it is in this domain, this temporal proximity if you will, that we experience the profound depth of spontaneous social experiences and the relations that emerge from them.

Our presence availability to others for interaction is informed by possibilities of communication and interaction with them. Technology becomes a means of production for interpersonal communication and interaction because it enables communication regardless of spatial (and temporal) distances. Connective technologies radically transform our presence and presence availability to others in relational and temporal terms.

Language occupies a privileged position in the co-production of intersubjective experiences. When people speak, their proximity in physical terms becomes a proximity in relational terms also. This is because speech not only serves as a means of expression (statements of fact, for example): speech produces effects that bind us.

These effects are described by sociologists and linguists as the product of a special case of language use called speech acts. Speech act theory offers descriptions of the ways in which speaking is doing and speech is action. The actions may only “occur” as mutual understanding reached by those in conversation, and produce no material consequence; or they may accompany physical activity also (such as in transactions involving material exchange, the coordination of task-based activities, and so on).

It is through linguistic exchange that people reproduce the normative basis of society. In other words, society is reproduced and maintained through speech-based performances. These performances, though colored by individual style of expression and delivery, embed the normative claims “belonging” to a society at a given time. Actors unwittingly embed these claims in their own use of language as speech.

Speech act theory further argues that these performances bind actors to one another through their mutual understanding of the claims embedded in their exchanges. To accept the premises of speech act theory, in other words, is to view society as a system of

meanings that have claims upon individuals, but which is only maintained through their use of language.

It would seem that a view of communication in which the binding of actors to one another is a linguistic phenomenon, and the effect of which is to reproduce society and nothing less, would place the mediation of communication in a position of critical importance.

The consequences of mediation are many, but among them are some of direct significance for a communication-oriented view of society. First is that speech act theory and its related theoretical perspectives tend to assume face-to-face interaction and performance. This opens up several lines of concern.

First, is the bracketing of physical co-presence, which means the elimination of access to visual and physical cues, or what are described as “facework.” Mediation eliminates the physicality of interaction and thus the countless non-linguistic gestural cues we provide through facework, body language, intonation, and so on—what are also called “paralinguistic markers.”

Second, is the loss of physical context. “Situated” (co-present) interactions provide actors with access to contextual cues and meanings belonging to location. Our interactions are informed by where we are (physically) and how that place is coded (culturally). By reflecting the expectations that characterize a place, we help to maintain it.

Third, is the integration of space and time. All human experience unfolds in a here and now. But the “here” that characterizes mediated interactions has neither place nor visibility. The virtuality of interaction through technology indeed creates a new kind of experience, but not as a form of “cyberspace.” Rather than look for spatial dimensions in virtual interaction, we will argue that it’s concepts of temporality and time that help us to understand this transformation.

The point of this digression was to show that mediation involves phenomena on several levels simultaneously. Our use of technology for communication transforms not only our interactions, but also their role in reproducing and maintaining relationships that persist through space and time. To summarize, then, the bracketing of the physical and co-present performance of linguistically-embedded interaction by technologies of communication mediates: 1) the facework of interaction, 2) the contextuality of situation, 3) and the intrinsic relationship of action to time and place.

Our inquiry into mediation of communication will take the shape of an investigation of the transformative effects of mediation, and for several reasons. These run from the micro to the macro, or from the impact technology has on the user and his or her immediate experience (or, the user experience) of communicating through technology, or primary effects, to the macro, or what we might call the secondary effects of mediation.

The investigation begins with the idea that mediation should be regarded as a means of the production of communication. In fact we’ll call these technologies production formats of communication. We will investigate the impact technology has on the emergence of

communication and interaction practices at the micro and macro levels: from the individual user to society. We will also examine secondary effects of mediation. These include social obligations and commitments, trust, the integrity of institutions, organizational hierarchy, and much more.

The following are some of the points we hope to make during our inquiry:

- as production formats of communication, communications technologies *extend the face* by transforming, amplifying, constraining, distorting, and otherwise translating the face and its use in communication as facework.
- the unhinging of individual presence from place transforms our negotiation of presence availability, in turn causing us to develop new ways of managing our access and availability to others.
- the possibility of communication in spite of physical distance or absence transforms relations between sense perception, affect, and action.
- this dissociation affects the seriality of action and interaction, allowing us to develop skills in coordinating action across multiple, and parallel, strips of interaction.
- the disruption of familiar contexts of interaction result in new ambiguities of intent and meaning, in turn affecting relations implicit in communication.
- these new ambiguities transform the power of communication to bind us to one another on local and global levels.

This inquiry would amount to nothing short of a long list of questions, however, if we did not also seek to develop some tentative answers. And that is why we have characterized our effort as an attempt at rounding out a pragmatics of mediated communication.

Insofar as communication unfolds through social practices, the transformations resulting from our use of technology as a production format ultimately become embedded in new social practices. Where there is a new ambiguity around a person's intentions, say as a consequence of talking over email, there are or will be conventions that help to reduce that ambiguity. Our dependence on the possibility of communicating anytime, anyplace, is not going away. However, its impact on our experience and pursuit of relationships, and their ability to contribute to reproducing society, trust, and social commitments is enormous. This effort is an attempt to map some of the theoretical and critical territory covered by this new and emerging "age of communication."

We can suggest several lines of inquiry into the human and social consequences of mediated communication:

- We have developed a dependence on technologies for the execution and coordination of distributed and yet tightly-integrated activities. This historical fact has produced a new human reality: our experience of time, and our relation to

temporalities, is becoming increasingly unanchored from face-to-face interaction. Our bodies and our direct physical experience no longer produce all of our realities. Nor is our physical presence any longer the condition of the speed with which we encounter real and inter-subjective realities. Rather, technologies and systems increasingly define the limits of speed, information, access, and the demands they place on us. It could be said that we are a culture increasingly defined by the machine connections and media rhythms in competitions with the long-since eroded traditional connections and rhythms of local community and institutionalized traditions.

- The very nature of interaction changes when it is mediated by communication technology. Bracketing of face-to-face cues and gestures shifts attention and awareness of the other to the production of communication instead. We recede from the shared rhythm of interaction to tap on keys, multi-task, or otherwise fragment our attention and awareness. Emotions are often screened out by technologies. And our deep and internal sense of timing, so crucial to the successful performance of face-to-face interactions, is displaced by the asynchronous back and forth of messaging technologies. On an interpersonal level, we find it difficult to achieve a sense of being in synch.
- Communication technologies undo the regularity of time and temporality that characterizes a life built on personal habits and social routines. Temporal regularity in the human experience has a place; habits and routines do not automatically equate to tedium or dull repetition. What looks like repetition is still unique and spontaneous human experience, and every repetition or habit is different from the last. Technologies, on the other hand, produce a recurring sameness. The operations and functions codified in the form and service of technology reproduce the same abstracted operation with each repetition. The lived spontaneity of repeating social tradition is displaced by the cold functional repetition of the operation. And we begin to confuse the two, thinking that what's dull is repetition itself, when it's the procedure that's dull, not the repetition.
- Culture develops attention deficit disorder. Immediacy and access, and the constant flow of communication and information, demand that we attend to whatever is nearest and most urgent. We lose a thread of continuity to the dashed line of distraction. Attention deficit disorder is not a lack of attention, but a lack of internal continuity and an excess of contingency. We pay attention, but in spurts that contribute little to a healthy and grounded sense of self.
- The widespread adoption of technologies of communication has displaced the causality normally found in a social chain of action. Technologies operate by a logic of "one event upon the other." Where our social activities involve recognizable conventions (and ordering) of "one event after the other," technologies introduce a radical dislocation of sequence and cultural logic. The sequence and procedure is initiated by and maintained according to technical terms, where the logic seeks efficiency over understanding. The logic of

procedure, or temporal arrangement, by which technology engages us is a logic of non-social contingency and temporality.

- The process underneath interpersonal and social activities is implicit and transparent. Technology makes process explicit. Consequently, we tend to spend increasing amounts of attention and effort on the explicit operation of functions, operations, and steps by which we make technologies work. This shifts our participation from tending to the care of our social partners to “interacting” with technical conditions.
- The culture of technology externalizes us. We dedicate more of ourselves to identifying with extensions, those being extended subjective powers and abilities, or objective technologies and mediated practices. An ever-greater amount of our mental and emotional life becomes occupied with matters of technique, method, material contingency, mediated image, and so on.
- The shift of attention from the state of face-to-face interactions to the state of technical processes results in a tendency towards efficiency, regulation, and control. Even our ideas of what constitutes successful interaction may change: from qualities like emotionally healthy, clear, supportive, and understanding, to interaction effectiveness, efficiency, and task completion. Work practices shift from concern with inter-subjective process to technical process first. But ultimately, even interpersonal communication may suffer the same kind of translation.
- Our proximity to one another is different when mediated than when it’s face-to-face. And as we spend greater amounts of time in mediated communication and experience, these attributes of technical proximity inform more and more of daily life. We could say that we live within both physical and virtual proximities.
- The cultural shift towards technology and technical process in communication and social interaction may produce a shift in how we see ourselves and in how we produce our identities. The interdependencies among communication technologies and social practices would suggest that we produce our identities increasingly through our integration into mediated social networks—be those friends, family, work, etc. Our sense of self and well-being may become interested in identity forms that are resolved without face-to-face encounters: online visibility, popularity, connectedness, “virtual presence”, etc.
- Mediated proximity is explained by its lack of physical reality and context. Communication and events circulate at a remove from objects, bodies, and faces. Information comes with speed but is removed from the context of its production. Messages are delivered without the context of speech and gesture that might help us unpack their original intent. Interactions unfold in a strangely disordered progression, intermittent and removed from the physical experience of being present with another.



- Participation in communication networks encourages us to be transitive to the steady stream and flow of communication moving through networked participants. Being connected means more than simply being online, or being plugged in. It means being in the loop and serving as a transitive node in the network. We are encouraged less to “speak” than to “repeat,” less to converse and more to pass along.
- The importance of knowing what’s going on in an interaction shifts to issues created by the introduction of technology: who’s on, what’s the mood and energy, who’s paying attention to whom, etc. Those aspects of an interaction that are easily gleaned from performance and face-to-face interaction become explicit concerns when technology brackets them out. Participants, often unwittingly, attend to matters of production rather than to each other.
- The illocutionary force of communication that binds interactants to one another comes under threat. Technologies of communication weaken the binding process. Very possibly, mediated interaction produces a different kind of bond, or fails to produce interpersonal and social relations in the conventional sense. Our trust in one another, our commitment to the future, and our sense of shared obligation to cultural norms and values would each be weakened by the dissociation of communication from human interaction.