Technologies Questioned:

Communication Technology

and

the Social Interface

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Summary

This document has been written for marketers, designers, developers, engineers, and those involved in the strategic decision-making process required to bring technology to life. But it has not been written for professionals alone. Thinkers and obsessive conceptual diggers should also find questions of interest herein.

That this document has been written does not mean it's finished. In fact it is far from complete, and I hope to re-issue it periodically.

But I haven't yet said what "it" is.

I'm firmly convinced that insofar as any culture requires the interaction of its members for its own growth and survival, so does ours. And we do it through communication. Unlike many other cultures, we are capable of change and transformation outside of the long-running biological processes that are supposed to keep us up to date. Communication operates on two levels: as a binding exchange between individuals, and as a reproduction of social norms, values, and other cultural "stock."

This project is an inquiry into the social interface between communication technologies and the user. I begin with the assumption that technologies involved in the mediation of interpersonal or social interaction do not simply conduct an operation, or execute a function, as they might in a more purely informational domain. Rather, I assume that these technologies become a "production format" or means of production for communication, and that a technology's "use" is nothing other than the set of practices that emerge around it. Those of us interested in designing these technologies, or in using them for some purpose or another (and this could be online dating or distance learning), must understand that we should look not at the technology but at practices. That said, this is not a collection of examples (that's another project altogether). It's a sampling of questions that scratch at the core of the transformation, where technical and social meet. Why bother? Because if communication is a mode of reproduction as critical as the biological, technology is far more relevant than we understand.

Introduction

Behind any kind of project there's a problem; a problem for which the project offers some hope of solution, of resolution. An answer, in short, to a question. Here you will find only questions. But they are leading questions. Questions that point in directions worth following (or such is my hope). Questions that describe a set of problems, and which might be considered by those pursuing those solutions.

Communication technologies offer up a potentially vast set of questions and issues, for the very reason that they involve two very different modes of production: the social and the technical. Not only are there the standard issues of computer mediated interaction, and user interface design, but there are additional concerns derived from the transformative nature of social interactions and relations mediated or produced with the help of technology. As Mark Poster wrote in the mid 90's: "…the Internet is more like a social

space than a thing so that its effects are more like those of Germany than those of hammers. The effects of Germany upon the people within it is to make them Germans (at least for the most part); the effects of hammers is not to make people hammers, though Heideggerians and some others might disagree, but to force metal spikes into wood." Communication technology changes our relations and the very foundation on which we build them: communication. It does this not by acting on us, but through a mutually informing process at the end of which is a "social practice."

It is important not to grant technology the power to determine human or social behavior (lest there be any doubt, this is not a vote for the NRA. Guns are bad). Designers exist not simply to make better looking or better functioning technologies. They exist to anticipate the ways in which the marketplace will adopt and use the technology. I believe that we create and constitute ourselves in and through our communication, which is to say, with and through interaction *with others*. And for that reason, I find communication technology doubly interesting to designers. For it not only requires us to think about interface and human factor considerations commonly associated with any technology design. It forces us to consider the interface of social and interpersonal dimensions with technology. Which means using sociology, linguistics, pragmatics, psychology, and more.

These questions are here as markers on a map, no, a territory… They are here to help us map the territory (since the two shall never meet) that lies ahead. And is it goes with prospecting, so it goes with charting a field of study: the more you learn, the more questions you raise.

More and more, we are going to find technology between us and our relationships, sometimes seeming to bring us together, other times seemingly to keep us apart. These are design issues if there ever were any.

Materiality and Amplification: Senses and interaction

When technologies facilitate communication, they are in a sense amplifying our natural senses and perception. It is as if our eyes, ears, and mouths were extended beyond their normal reach and capability. But technologies extend our perceptions asymmetrically. Phones improve our hearing but do little for our vision. Email is used for conversation, but of a kind that lacks the tone and expressiveness of the voice. Thus it makes sense to ask how a technology extends or amplifies the sense, in what mode, and with what kind of results.

Technology Form

All technologies have physical form. From screen size to keypads, speakers to headphones, their "form factors" inform their use. The "materiality" of a medium is a factor of its effectiveness and functionality, its transformative potential, as well as how it amplifies human perception and activity. When it comes to communication, these form factors in turn shape human factors (aspects of social and interpersonal interaction).

- What are the technology's modes of user interaction?

- What of the face does it translate, extend, and amplify?

- In what ways does it amplify certain facial gestures and features?

- With what kinds of distortions?

- Is the technology's interface to our perception and expression adequate?

- In what ways do limitations of the device itself (e.g. phone keypads and SMS) constrain and inform communication passing through it?

Mode of communication

Technologies of communication are either synchronous or asynchronous, meaning that they enable communication in real-time or not. The difference plays a critical role in the nature of the interactions people have through them. In asynchronous communication, a secondary medium is required with which to record the interaction. This obviously involves a high potential for message distortion (at sending and receiving end), as well as for the production of artifacts belonging to the medium. These artifacts can themselves obscure or confuse communication.

- Is the technology synchronous or asynchronous?

- What kinds of communication does it facilitate: conversation, messaging, information?

- In what ways does it capture communication (microphone, camera, keyboard, etc.)?

- How does it call on our attention?

- How does it sustain our attention?

- Does it pass attention in both directions (e.g. can a listener show that she's listening?), and if so, how?

- How receptive is the medium to our participation, and how accurately does it pass communication?

- In what ways does the technology's modality inform, constrain, and enable different kinds of communication?

- Can it be said to co-produce interaction insofar as its modality is a format for communication?

- How does its modality make it suitable or not for particular social practices?

Features from the face

Technologies are able to represent or transmit limited expressive range, using the voice, vision, hearing, and or writing. Which of our perceptions they amplify conditions how we use them, and for what purposes. We might not notice the manner in which our perceptions are telescoped and focused when we use technology for communication. I would argue, in fact, that these technologies extend the face,

- How does the technology capture and express the face?

- What kinds of consequences are there for communication when face and its expressivity is passed or blocked by mediation?

- What physical features of the face does the technology reproduce directly? (E.g. video conferencing presents direct images of its users.)

- What physical features of the face does the technology represent indirectly (E.g. email permits only indirect images of the face, through written descriptions.)?

- What physical features is it unable to reproduce or represent, and what intensities of facial expression is it unable to reproduce?

- What kinds of distortion does the technology add to transmission?

- What happens to the communicative potential of these features (e.g. cues, gestures) as a result of their mediation?

- For example, does the ear lose its ability to locate spatially or to discriminate who's talking to whom (direction, spatialization); does the eye lose its ability to wander; does the voice lose its intonation?

- What communicative purposes, from intimacy to anonymity, are served by the medium's particular relationship to face and its expressivity?

Secondary medium

Asynchronous communication (anything not in real-time) always involves recording, with the notable exception of latency resulting from long-distance transmission. Most of the time, the recording takes the form of "text." But there are also non-textual recordings, like voice mail, images, animations, icons, and video. Thus we have a distinction between direct media, which transmit, and indirect media, which involve recording.

Video is direct, for it actually shows the communicative performance. Text is indirect, for it can only represent expression as writing. In the case of indirect representation, we lose the immediacy and affectivity of human expression, but gain history, mobility, and to some extent faster and cheaper message circulation. Because so much communication now uses indirect media, we should ask how communication is transformed as it is forced through a secondary medium for recording.

Affective capacity

Our affects (emotion, mood) are expressed and perceived by our use of facial expression, physical gesture, vocal intonation, and writing style. Because technologies of communication extend our perceptual senses unequally, their affective capacities vary.

- How do we express ourselves emotionally when using asynchronous media? If we try to show emotions through text, email, IM and so forth, how well is it communicated?

- What's a medium's ability to elicit emotional responses?

- How well does the emotional import of a message travel through a network of readers? Do these kinds of messages circulate well?

- Do asynchronous technologies present adequate ways of preserving and circulating communication with a high degree of emotional content?

- How do a technology's recording mechanisms actually shape its ability to capture affect?

- Are there communicative benefits to the bracketing effects of asynchronous media?

- What impact does the reduction or compression of affective and emotional content have on relations between people?

- What kinds of affective ambiguities creep into communication that might then need to be resolved by further, and perhaps unmediated communication?

- In what ways does a medium's bracketing of affect create communicative opportunities for the self, or subject?

- Do applications in which individuals "play" with their identity depend on the screening of affect?

- If this were the case, what threat might be posed by media that do a better job of transmitting affect?

- How do we compensate for the bracketing of emotional content from communication?

- Does the transformation of affect in and through mediated interaction give rise to ambiguities of authenticity, integrity, and sincerity? Of intent in what is said or communicated? Of what would constitute the desired or appropriate response?

- If so, are these ambiguities a driving force in communication?

Paralinguistic markers

We use non-verbal cues to supplement our speech with context and subtlety. Our faces are capable of more than 5,000 unique expressions, each of which might accompany the act of

talking. Most technologies of communication bracket these cues by screening out our visibility. Even those that permit direct visual transmission, such as teleconferencing, cause us to express ourselves differently. These gestures can be a critical part of communicating accurately and effectively. They gain importance with the degree of affect a communication seeks to achieve.

- What gestural and expressive cues, normally associated with the face and with body language, can a technology pass?

- How clearly or authentically does it pass them?

- How important are these cues to conveying affect or feeling?

- Does a medium or application pass these cues through some kind of representational medium (text, image) or through a recording?

- Is the voice a more authentic means of expressing cues than text or image?

- How well does the medium or application capture cues expressed by the user?

- Do we choose to communicate in some cases by a medium that does a better job of transmitting these kinds of cues? Or in some cases that screens these cues?

- If a medium brackets the expression of cues, as does for example email, what impact does their disappearance from communication have for interaction?

- What kinds of confusion or ambiguity can be directly attributed to the challenge of supplementing written communication with cues needed for correct interpretation?

- What kinds of expression, such as wit, humor, irony, flirtation, and so forth fall flat through text forms of communication?

- In what practices does the creation of substitute representations of cues lead to new forms of interaction or expression? Are online games, communities, discussion boards, and more a new kind of interaction because they require different kinds of expression and interpretation?

- Do substitutes for cues (emoticons are a crude example) provide a real communicative service? Can they be effective?

- Are we seduced, intrigued, and aroused by the absence of these paralinguistic markers?

- Do users compensate for the absence of expressive cues by a turn to literal expression? Or, as is often the case with jokes, does expression lose its impact if it requires explanation?

Secondary medium

Asynchronous media by definition transcribe communication to a recording (secondary) medium. It's because communication must pass through a secondary medium that we call it an indirect medium. The use of the term indirect may seem confusing. Email after all, is a very direct way of communicating. The distinction is important though, for think as we might that we're communicating directly when using email, we're writing our utterances to each, not speaking (uttering) them. And we're writing them without seeing the person(s) to whom we're writing—so there's no possibility of using visual cues and local context. Some kinds of expression simply don't survive the translation; others use it.

- What is the impact of a secondary medium (e.g. text) on the maintenance of interpersonal relations?

- Though we might think of it as speech, talk, or conversation, text messages are indeed *written* more than they are uttered. What does this mean for communication?

- What new kind of expression is produced through asynchronous mediation? Is it a new kind of talk and conversation, or a faster kind of messaging, a form of talking out loud but in the distant presence of the recipient, or something else entirely?

- What features of communication are unique to our age? What are some of the particular social and cultural consequences of the combination of connectivity, computing power, representational and recording media, and translation among them? What are consequences for interpersonal relations?

- How and where does the proliferation of digital artifacts and copies impact society?

- What impact does it have on communication, and further, on interpersonal relations?

- How is the materiality—the physical form of a recording medium used in messaging—a relevant feature of communication? How does it inform what people say, to whom they say it, how they say it, what they expect of it, and so on and so forth?

- How important is fidelity (resolution) to asynchronous media?

- Do we naturally prefer higher-resolution media?

- In what kinds of communicative or cultural practices do participants work with the medium's resolution and fidelity?

- For all of its crudeness, basic ASCII is used to relate billions of messages over the internet each day. Do we develop an affinity for media that are familiar, even if they're inferior to newer ones? Do we prefer technologies with which we have developed a competency? Are we better at communicating through familiar media than we are with new ones, even if new ones are more "transparent," or higher-resolution?

- If there translation from one format to another (e.g. text to speech), what might be lost or distorted in the process?

- How will translation across recording and representational media produce new ambiguities, uncertainties, and sources of confusion?

- In the case of asynchronous media, can a message be forwarded or passed along easily? Does the portability and even durability of a medium's messaging format help to explain its popularity or success?

- What kinds of packaging and wrapping are required to enable a message to travel beyond its origin?

- What kinds of social practices develop around these messaging formats, and how do they use the attributes particular to a medium and application?

- How do practices developed for one medium spill into others?

- To what extent does our ability to relocate, recall, reprint, and repeat archived interactions inform the interaction itself?

- Are messages catalogued, and if so, by what criteria? How does this affect their utility?

- Who has access to them? How does access inform the communication itself, if it does?

- If catalogs and meta data on messages are involved in the process of communication, to what extent do techniques of data storage impact message meaning? Do storage techniques for messages create context? Can the context of an interaction or communication be stored?

- Does the very possibility of archiving messages rationalize communication? Are there domains of interaction in which people communicate differently in order to make their transactions, conversations, and interactions easier to locate later? Or are there cases in which people regulate what they say, to whom, and how, in order to protect themselves?

- How do messages guarantee their authenticity? Do they and can they?

- What kinds of risk do recording media create for us (misinterpretation, forwarding to unintended recipients, etc.), and how do these risks affect how we communicate?

- How well can a secondary medium pass information, detail, and other transaction information?

- As a format, what is a medium able to capture and represent with the greatest amount of accuracy?

- Do representational and recording media have a bias towards information, and against meta-communicative content?

- How much context is lost in the representation or in the recording?

- Do we have a tendency to speak or interact differently in order to be more clear, or effective, in mediated interaction?

- Can it be argued that messaging formats proliferate third person speech and interaction, by detaching speech from the speaker and distributing it among non-present audiences?

The "stroke"

Transactional Analysis, an old but nonetheless relevant branch of psychology, characterized human interaction as an economy of emotional "strokes," in which communication not only serves to express what is stated explicitly, but more fundamentally serves to provide mutual existential acknowledgement and recognition. At issue with mediation, then, would be to what extent this is satisfied in non face to face communication. When using technology to communicate, do we provide each other with personal recognition that's simply less intense? Does it depend on the medium? Or might our needs for this fundamental supply of ontological security be adapting to new conditions for getting it?

- Is recognition of basic ontological security possible through mediated exchanges?

- Is there a digital touch? If so, how long does it last, who can it be obtained from, in what situations of mediated interaction, how, and how real is it to us?

- Do we really feel acknowledged in and through mediated exchanges?

- How much "live" is required for this to pass? What's required? Does a reply to an email supply this basic human recognition? Does reference to a message posted on a bulletin board count? Is seeing one's comment forwarded, pasted, or quoted good enough? Does traffic to one's web site count for "recognition" of this kind?

- If this kind of acknowledgement does occur in mediated interactions, does it differ only in degree from the acknowledgement obtained in co-present human interaction? Or must we argue that the absence of physical interaction alone means it is not just of a different degree, but of a different kind?

- Does mediated acknowledgement substitute for the kind gained by successfully sharing physical interaction with others.

- Do people participate in mediated interactions in order some times to obtain acknowledgement of this kind? If so, what effects do they experience when it's not forthcoming?

- How much acknowledgement is gained from the act of expression itself—regardless of the recognition that comes back?

- Is this an explanation for the popularity of posting and writing to online applications?

Extension of attention

Society today places so many demands on our attention that some would argue we are developing a cultural version of attention deficit disorder, and that our attention span has fragmented as a coping mechanism necessary for dealing with society's many stimuli and stresses. There's no doubt that attention figures prominently in any understanding of our interaction with one another as well as with media, and that the attention we pay to each other differs from the attention we pay to non-living things. Attention also needs to be understood in context, insofar as it is called upon by the phenomena (people, tasks, interruptions, etc.) with which we become engaged. Here we look at how different communications technologies call on our attention, transmit or represent our attention, for what kinds of length of time, and so on.

Selection of attention

Technologies must interface somehow with the human mode of displaying attention. Because they may privilege the voice, the view, or the written word, their means of doing this differs. We can only assume that our means of communicating through technology adapts to each device's limitations as well as possibilities.

- How does a technology or application capture a user's attention?

- How does it transmit attention (to another person or persons)?

- In what sense are we forced to divide our attention between a medium and its other users? When chatting, emailing, text messaging, or even when recording a voicemail, attention that we give to others is not in realtime. Some of it may be captured in the medium itself, as a direct recording (of intonation, inflection, volume) or as an indirect representation (such as the use of ALL CAPS in a chatroom). But it is not shared. If it is part of a social encounter or interaction, it is always displaced.

- So can attention pass through a secondary medium such as text? Is writing capable of recording attention?

- What happens to communication when we don't give one another face to face attention?

- What kinds of techniques have users developed as a means of giving or getting attention in different media and applications?

- Is the desire for attention a motivation for engaging in particular kinds of mediated interaction? Can this be seen in how we interact, write, and respond to one another?

- If mediated interactions afford the opportunity to get some measure of recognition for others, how might future technologies and applications crate new opportunities for doing so?

- How does an application sustain attention levels among its users? How much of this can be engineered and designed; how much of it is a product of use alone?

- To what degree does using a technology for interaction shift our attention to the medium itself?

- How does the medium handle changes in the display and direction of attention during interaction? In other words, how dynamic is the medium or application?

- In what kinds of media and applications does the screening of physical or visual participation offer benefits and advantages to users?

- In what kinds of media and applications does the representation and transmission of attention produce constraints on interaction? How do these constraints affect interaction?

- Do interactants play with the medium's inability to convey who's directing attention towards whom? Do they abuse it? Do they conceal their interests by it?

- If the distribution of attention is a strong factor in social situations, what fundamental limits are there on mediation of social interaction and practice?

- What kinds of attention giving and getting take new forms in asynchronous communication?

- Does the technology have other uses that might compete for our attention (e.g. computers, which run many applications and are often used in the workplace)?

- How well can we multitask among competing applications and still interact and communicate with others successfully?

- How much does the context in which we use a technology shape the amount of attention we pay to it?

Distortion

Technologies of communication by definition distort human communication. They amplify some senses over others, and in many cases limit us to using written language—even one uniquely technological short-form of verbal expression called texting. The issue then

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becomes what are the consequences of these distortions? How does communication survive it, adapt with it, and even anticipate it?

- How does a particular medium distort human communication?

- Does distortion occur in the mode of expression, at the level of its content, of meta-messages (e.g. cues), of timing and interaction, or at a structural level (relations)?

- What impact does distortion have on the interactants, and on their use of the medium? In other words, how much of the distortion that is produced through a medium is already integrated into communication?

- Are some kinds of distortion more easily tolerated than others? If so, why, and in what cases?

- In what cases is the distortion great enough to seriously undermine the user experience? And in what cases might a technological or application improvement diminish distortion?

- When users can anticipate distortions caused by mediation, do they make it explicit within their communication?

- In what cases might a distorting effect not be recognized? Have users developed the habit of taking this into consideration?

- What kinds of compensating mechanisms does a technology or application build into its design?

- In what cases do distortions caused by a medium give users the chance to play with its communicative or social effects?

Engagement bandwidth

The limitations and constraints a technology imposes on expression and interaction inform the kinds of interpersonal and social encounters it makes possible. This lends a technology or application a kind of "social bandwidth," suggesting that it might mediate "rich" interactions only up to a point. Weddings, for example, are performed live and in person. They're too rich for mediation. Laying off employees, on the other hand, is apparently not—or is somebody making a mistake?

- How well does a technology or application transmit unstructured talk and interaction? What is its "dynamic range," so to speak, in terms of permitting spontaneous and engaging interaction?

- Is the production of interpersonal and social relations compromised by a medium's low dynamic range? To what extent do we need the dynamic range of face to face interaction for the experience of sharing time together?

- Does this kind of technical limitation apply to the medium's or the application's uses?

- What kinds of interactions might not be possible, or advisable, through a medium because of its inability to translate the dynamics of interaction?

- How do users test a medium to see how well it handles interaction dynamics?

- Are there particular kinds of interactions that we attempt in new media or with new technologies in order to "test" its dynamic range? It is often noted that porn is the first use of a new recording medium. Is there an analogical test for communication technologies?

- Does a medium or application produce its own versions of interaction dynamics? For example, can email commenting and forwarding be considered forms of "side-play" in social interaction?

- Should technology and application developers assume that communication technologies should have as high a dynamic range as possible? That at the level of the interface as well as connectivity and bandwidth, a technology should be as transparent to human interaction as possible?

- To what extent do users enjoy working through and adapting to the limitations of a technology?

Synchronization

The degree to which a technology enables us to get in synch with one another informs its use. Though all communication can be said to involve a certain amount of synchronization, the amount of real-time presence captured by a technology will be seen in how it captures our attention as well as what kind of attention it captures.

- What is the role of synchrony in social interaction and communication?

- How well do we adjust to communicating in ways that prevent us from getting realtime feedback from others on how we're doing?

- What are the effects of latency for human communication and interaction?

- Does the medium operate in synchronization with devices it is connected to?

- If not, what kind of delay does it force on communication?

- Is the delay (latency) in delivery and rendering messages and interaction? Or is there also delay in obtaining user participation?

- Both synchronous (phone) and asynchronous communication technologies are required to get user attention before communication can take place. We don't

always sit in front of our chat, IM, and email clients. Nor do we always have our cel phones on and ringing. To some extent, we know this about a medium and don't expect an immediate response from people we may be trying to reach. To what extent does each medium's particular way of getting attention and of delivering a call or message become a part of our use of that medium?

- What kinds of ambiguity are created by the delays involved with communicating through a particular medium or application?

- What kinds of cultural phenomena demand that participants be engaged in realtime? How might latency, delays (programmed, intended, and not), and other temporal interruptions shape or influence these social experiences?

- What implications do recording devices like TIVO have for TV and the role TV plays in social and cultural engagements?

Functional effectiveness

Technologies differ in the degree to which they can effectively transmit our communication. Their differences come down to the mode in which they connect us, the degree to which we are able to verify their effectiveness, the ambiguities they introduce into communication, and more. We tend to develop ways to compensate for their inadequacies, and fashion those into conventions and habits. Designers continuously seek ways to improve technologies, and roll out their improvements with each new version of a device or application. And sometimes the ineffectiveness of a medium itself becomes the focus of play and experimentation—such as the exaggerated or enhanced advertisements and self promotions singles are guilty of in online dating systems.

Risk/success ratio of interaction, message

The degree to which we are successful in communicating through a technology informs how we use it, with whom, and for what purpose. When we encounter risks in communication, we tend to limit our exposure, in terms of what we say, to whom, and how.

- How important is it to us that we know if a message has been delivered, read, and even understood?

- In what cases does the fact of not knowing become a part of communication and interaction itself—for example in cases where tasks, responsibilities, reputation, activity coordination, or even a first date may be at stake.

- This kind of acknowledgement and recognition is an intrinsic part of face to face interaction. How then does this affect our communication?

- In face to face interactions, we can express different degrees of recognition and acknowledgment. They include: "I heard you but ask me later," "I see what you're

saying but I'm not going to agree with you," and "I'm totally with you on that." This range of acknowledgement is simply not possible with any form of mediation today. What impact does this have on how we communicate, and perhaps with whom and about what?

- How sensitive are we to a medium's intrinsic "coldness"—its inability to provide visual and physical recognition, agreement, acceptance, and so on.

- How hard do people try to reach others, and to obtain confirmation of their message success or delivery, before giving up? To what extent are users willing to try in spite of a technology or medium's tendency to confound their efforts?

- Would it be possible to profile user types in order to group those for whom the bracketing effects of mediation are not worth their benefits, and those for whom even the sometimes thin rewards of mediated interaction are adequate?

Recourse during failure

In face to face interaction, we always have recourse to the full contours of our personality and character should things go wrong. We can backpedal, skirt, avoid, deny, persuade, and otherwise deploy our personality to disentangle ourselves from awkward social encounters and misunderstandings. The degree to which we can do that during a mediated interaction will of course shape what we offer, how, and to whom.

- What are a our options when a medium or technology fails to deliver a message? When connection isn't available or is unreliable?

- What can we do when a medium or application fails to deliver the message accurately, or when the medium is excessively noisy?

- What kinds of failures does a medium tend to generate?

- How long does it take to address and repair a failure?

- What kinds of consequences does this have for adoption of a technology for particular uses?

- In what ways do we accommodate this into the practices we develop around a technology or application?

- Do we choose redundant communication methods in order to assure successful delivery of our messages?

- What are the consequences of redundancy? Do the shortcomings of media sometimes cause us to overproduce communication? Does overproduction lead to its own type of confusion?

- What medium can or do we use when a message has not been delivered or understood?

- What are the risks of engaging in mediated interactions in situations where failure cannot be addressed face to face?

- Do we tend to avoid interactions that might suffer should their delivery fail?

- How many failures will we tolerate and forgive before we reduce our use of it?

- Does message delivery failure impact relations among us?

- Are there affective costs to failure, for example if participants feel insulted, interrupted, or cut off? And in a particular situation, what are worst case scenarios for these kinds of outcomes? Should they be taken into account?

- Does use of a particular technology create situations in which communication among members of an audience might be overheard?

- If so, how does this place constraints on communication? And in what cases do privacy concerns guide our choice of communication channel?

Silence

Though technologies serve to connect us when we're not physically co-present, they spend a great deal of time, we hope, being silent. Now this silence can mean something, or not, depending on a number of factors. Thus even a silent phone can have us pacing with anticipation.

- Does silence have meaning? What kind of meaning and in what context?

- How do people interpret pauses and silences over a medium or application?

- How much silence is required for the time between message sending and message response to actually considered silence?

- How do we create or express silence in a given medium or application? How do we express silence, or "ignoring" others, in a discussion group?

- To what extent does the ambiguity around what is and what is not actually intended silence "pad" an interaction environment?

- In what cases do we use silence to our advantage?

- Some silences are louder than others, just as some are more directed than others. Both media and applications create different kinds of silence. How does this influence how we use them?

- How do silences accrue meanings through experience with specific individuals, conversation partners, and through particular media and applications?

- How do silences become personal and what is their range of meaning?

- How does the intervention of a medium create ambiguities around these experiences of silence?

- How do we know the difference between impersonal quiet and silence directed against us? And how do we show that we are intentionally ignoring a person or interaction when our nonparticipation may easily go unnoticed?

- What examples are there of different silences over different media with different people? To cite one: knowing how to take a no answer with a home phone, cell phone, or email, where connection failure of changes meaning depending on who is involved.

- To what extent does nonparticipation in a collective online or messaging application motivate and drive interaction itself, as if as a means of clarifying the silence or ending the quiet?

- What particular kind of nonparticipation is the lurker guilty of? How do members of an online community assess whether or not a member is eavesdropping (lurking) or simply too busy to get involved?

- What kinds of practices emerge to create civil or polite ways of displaying our unavailability?

- What kinds of stresses and symptoms do we suffer or experience from being highly available to others?

- How much quiet can an online community take before it withers?

- What sense for frequency and traffic do users develop about online communities? And how can online community hosts build participation?

Truth claims

In the view of the theory of communicative action (Jürgen Habermas), talk can have the result of binding us to one another in a mutually-shared pursuit of understanding. This narrow view of communication—because it excludes strategic communication geared towards selfish ends—insists that speakers and listeners make three particular truth claims when pursuing communication oriented towards reaching understanding. They must be sincere, factually correct, and have the normative authority to say what they are saying. At issue for mediation, then, would be how the bracketing of face to face exchange might undermine the possibilities of wagering and testing these truth claims. And furthermore, what impact this might have on our ability to bind to one another.

- How does mediation distort the conditions required for the production and testing of the claims to truth required of communicative action?

- How is validation of a speaker's sincerity compromised by mediation and its bracketing of physical presence?

- How is the verification of truthfulness of a statement's facticity compromised by mediation?

- How is verification of a speaker's normative position and authority compromised by mediation?

- How do synchronous and asynchronous communication differ in the presentation of truth claims as well as in their resolution through interaction?

- How does use of a secondary medium such as text interfere with the possibilities of communicative action?

- If illocutionary force depends on certain conditions of presence being met, do these conditions represent absolute limits, or thresholds?

- Is the binding that accompanies communicative action possible through mediated interactions? If so, is it a thinned or diluted form of binding?

- Do mediated communication practices create the possibilities for new ways of binding interactants?

- As media become acceptable production formats of communication, do the conditions for communicative action change?

- Do conditions in which sincerity, facticity, and normativity can be staked and validated during interaction change as a result of mediation?

- Is the production format of communication itself subject to the conditions that govern acceptability?

The negotiations of presence availability

It's one of those terms that can mean so much that it comes to mean nothing at all: presence. It appears throughout the history of philosophy. It scratches at something transcendental while connoting something physical. It describes what separates us while offering connection at the same time.

Theories and histories of media, communication, and technology often use the contrast of presence and absence to convey the tension between our physical proximity to each other and our ability to maintain relations even when we're apart. It's understood that communication technology provided a major breakthrough by lifting us out of physical space, enabling us suddenly to communicate across increasingly vast distances. Until the

telegraph, all distance communication took place only at the speed with which a message could be physically transported from one place to the other. What the telegraph began, we continue today with a network spun of wires and transmissions, connected increasingly to work, home, and elsewhere.

It's one thing to get connected, and another to be present. Are networking technologies really connecting us? Does the internet age provide more connections? Or do we pursue these technologies more often to soften the feeling of disconnection, and of absence, we experience in our physical nomadism? Either way, of course, the technology is here to stay. It's become central to the very organization and operation of our economies, if not most sophisticated systems.

What interests us here is where presence becomes tangible and real for technology's users. How it is comes into play when we go to communicate, as when we try to limit communication. These new communication technologies place claims on us as material and as demanding as hallways, chalkboards, and desks place claims on students. They are our means of access to others, and others' gateways to us.

So what does presence mean, and how do we show others that we are available to them for interaction? Ordinarily, our presence among others is physical, and our interest in becoming engaged in conversation or other interaction is a matter of making our disposition obvious to those around us. This is how we have always negotiated our presence availability to others. And how we have found socially acceptable ways to turn into or away from their company.

Communication technologies complicate matters. They not only provide others with access (to us), they create expectations that we might have difficulty dealing with gracefully. We are fundamentally oriented towards keeping the peace with others, meaning that we have others in mind when it comes to our interactions with them. Having lost access to use of our eyes, face, and body, how do we convey our need for privacy, or our desire to get involved, with the subtlety that we're accustomed to? In face to face situations, we can negotiate these shifting interests without putting others on the spot. In mediated circumstances, we lose recourse to our characteristic style of negotiating an interaction. The results can be messy, and provocative. In either case, the intervention of communication technology changes a great deal of the social contextuality of interaction.

Synchronous aspects: Connection

Iteration

Communication is iterative by definition. Each utterance belongs to a string of utterances, structured loosely or not as a series of statements and responses. Technologies not only complicate this chaining of utterances, they may have a more profound impact on the iterability of communication itself. If our interactions are characterized by a tendency to answer a statement with a response, and this is conditioned by our physical presence to one another, what happens when the cost of suddenly disappearing (from a chat, IM,

message board, etc.) drops to nothing? Why continue conversation when there's no cost to simply leaving the room? You can imagine what this could do to everyone involved…

- What kind of call does a technology make on its users? Do media differ in the degree of urgency they impose on us?

- To what extent do our options for answering a call, or responding to a message, inform our decision to engage at any particular moment?

- What are the social codes that govern whether it is acceptable or not to ignore a call?

- What are the social codes that govern how quickly and how we should respond to an incoming call or message?

- How specific are these codes to contexts of use (practices) or to the individual habits?

- In what kinds of circumstances might we experience difficulty handling a call or message with the appropriate amount of grace and civility?

- How does the fact that many of these circumstances are private, not public, inform our habits?

- What impact does the fact that we can't show our availability for interaction to others in mediated situations have on our experiences with those applications?

- What technical affordances does a technology permit for not taking a call?

- Does it have a means by which to identify the caller and return it later?

- Does it have a means by which the caller can leave a message?

- How far will we go to be polite towards the authors of certain calls or messages?

- What social grace would be lost if or when we automate our responses to some incoming calls?

- Does an incoming call or message produce information about itself? Its sender? Addressee? Content? Intention? Urgency? Which of these features might we expect to see adopted by media that don't currently offer them, and with what consequences?

- How would phone usage change, for example, if incoming calls had subject lines?

Framing

Interactionists use the term "framing" to describe the contextual boundaries of a social encounter. The frame forms a beginning and ending to the interaction, in between which we can scale our intensity, speed, interest level, and so on as long as we still know what is "going on." That's the key phrase: what's going on. Without having to define it, we have to be able to recognize it. The framework must provide recognizable context. And that's one of the reason that framing is as mushy a concept and principle as it sounds. You may not be able to characterize the framework that makes a casino what it is (the money, the buffets, the desert, the lights, the day, the night, the girls?), but you know it when you're in it. Just as you know when you're in trouble, and you know when you're in for a promotion.

The idea of a frame is critical to the idea of interaction as performance, because for us to participate in a social encounter we have to know what is going on. And when we interact, we interact not only with one another, but with the social framework itself. Context informs our action, behavior, and understanding. How a technology interfaces with, renders, distorts, or conceals this social framework is important not only to how well we can proceed with communication, but also to what extent our participation reproduces the social framework. If communication technologies strip desks out of the classroom, and democratize learning, do they also undermine the relationship between education and social conditioning? If chatrooms are free of moderators, let alone disciplinarians, what context is there to keep people's language in check?

The issue with framing, then, is how do virtual communication technologies and experiences serve to reproduce the normative and social basis of society, if that basis hangs on the richness of communication. And how does the lack of context (framing) impact our ability to successfully interact through communication technologies?

- Context-specific conventions govern the moves used to open an encounter, conduct it, and then bring it to closure.

- How do we initiate an encounter through a particular medium or application?

- How does we close it?

- What latitude for social framing moves does the technology permit?

- Can we use familiar framing practices when using a technology or application, or are we forced to adopt new media-specific ones?

- In what ways do our options for framing an encounter shape our decision to use a particular technology or application? And how do they inform our ways of using it?

- Some of our applications of mediated interaction have very little correspondence with the framing techniques and practices that help us to negotiate daily routines and encounters. How does this impact our communication in these situations?

- In what kinds of online interaction environments would real or imagined framing conventions be of help?

- Do framing conventions used in scheduled online chats and online conference calls, for example, provide structure useful to the interaction?

- Though many examples of mediated communication lack a relationship with time, routine or otherwise, some have a strong correspondence with temporal frameworks. Daytime and night-time, work hours and evening hours, morning and lunchtime, trading hours and after market close—these and other everyday temporal frameworks do inform many kinds of online communication, for example. How do the ever-present states of online applications change or influence our relationship with temporal routines?

Addressing

When we communicate, we communicate with a specific somebody. We address ourselves to that person, or persons. Addressing can be explicitly stated, or implied. In either case, we can hardly imagine doing this without a face. And yet most technologies still require us to address each other without recourse to facial expression. The consequences are not only a matter of grace and politeness, or even of starting off on the right foot. Technologies can have disastrous results when addressing goes awry.

- To what extent does a medium or application allow us to personalize the way in which we address recipients?

- In what kinds of situations is our ability to show style, personality, and familiarity with a recipient important to how we select the medium in which we might make contact?

- What impact does the flattening of addressing have on mediated interactions, and in which cases?

- Do use practices alone determine whether or not a personalized address corresponds to sincere personal intent?

- What kinds of cues do we use to discriminate false personalization and addressing from the real thing?

- Addressing is the primary means by which to distinguish spam email. To what extent does addressing invite abuse?

- How might user practices developed around addressing create barriers on the net for message propagation?

- If addressing becomes a primary means of identifying trusted senders and sources, does this mean that communication is often bound by the existence of relationships?

- The internet has obtained much of its interest from its ability to create relationships, or at least permit and facilitate interactions among people who don't know one another. How do we filter the signal from the noise, and opportunities from garbage?

- With ever-increasing access to people enabled at any time by greater numbers of devices, how important will issues of identification be?

- Might media and applications be asked to validate or verify callers and senders?

- What kinds of permission-based agreements will we make with one another, and with the companies that hope to reach us, in order to create some measure of control over access and its violation?

- Aside from making addressing explicit, will we also want to know more about the nature of a call or message? Might subject lines, priority flags, and other meta data become standardized ways of giving users more choices about whether or not to respond to an incoming call?

Frequency

Communication is not only about the content (spoken or unspoken) conveyed during an exchange, here and now. It's about the relationship that persists during the long stretches of time in between encounters. For the most part, we have routine interactions with our friends, family, and colleagues. And those routines involve a certain amount of stability. Oftentimes it includes the frequency of our interactions, as well as intensity, topic or theme, etc. How we negotiate the frequency of communication can become an issue when technologies provide instant and constant access through a diverse number of devices. We may find ourselves over-communicating, under-communicating, being too explicit, being not explicit enough—in short being ambiguous. Access and connectivity are not magic bullets when it comes to connections between people and their habits of maintaining relations.

- What kinds of factors are involved in the frequency of a person's contact with others?

- Are mediated interactions considered as a substitute for the real thing? For whom, and in what cases?

- How does the frequency and regularity of communication, by email or phone for example, produce its own rhythm?

- How much of our sense of obligation to call or respond to a call (or message) derives from historical experience and habits of use?

- What kinds of patterns develop around our use of various communications technologies?

- What rhythms and habits do we develop around the frequency of communication we have with one another?

- How binding are these rhythms?

- What assumptions do we tend to make when rhythms are broken?

- How deeply are we embedded in routines (characterized by frequency) of interaction in everyday life, and with people considered members of regular communication?

- Do these develop into shared perceptions of how a medium or application is used— or is that a local and specific understanding?

- To what extent and in what sense do we use technologies to stay in touch with one another, or to maintain distance, privacy, and personal space?

- Are there cultural and social norms around the amount of contact one might have with others? And is this dependent on the medium or application used?

- In what kinds of interactions does the frequency of contact make a significant difference? In work, or in online play, for example?

- To what extent does the frequency of our participation in mediated interactions compensate for our physical absence and invisibility?

- Can the frequency of our appearance at a discussion board, in a chat room, in IM with friend, etc., produce a virtual "presence?"

- If we are able to maintain a virtual identity and presence with others, whether in particular applications or communities, or globally, does this presence ultimately drive our participation? Do we become compelled to continue virtual participation in order for its own sake?

- How strongly do we feel that we belong to a virtual community? And how strongly do we feel that membership as a real expectation on our time, our presence, and our availability?

- To what extent does a temporal regularity and frequency constitute the nature and force of these claims?

Intermittence

Face to face interaction is continuous, that is, it has a continuity of flow. Interruptions are precisely that because they break up the flow of conversation. But technologies used for

communication may have an intermittence that results from poor design, inadequate infrastructure, or some other technical constraint (intended or not). How do we deal with the intermittences our mediated communication gives rise to? How do wee identify them as machine-caused and not real communicative signs?

- How much or how little continuity does the medium or application provide those communicating with it?

- When is intermittence a feature of the technology itself, and when is it an aspect of user practices?

- How well are users able to deal with it?

- What's the impact of intermittence on communication itself? How does it impact relationship maintenance? Does technical intermittence create confusion that spills into relationships?

- Do we sometimes mistake the intermittence of a medium for intent? How do we get around this, and when is it by increasing the frequency of contact?

- When human interaction is subjected to intermittence does it want to transcend it? Does intermittence create issues? Or does it fit in with styles of relationship maintenance and communication?

Asynchronous aspects: Connectivity

To receive a call one must pick up the phone. To receive an email, one must be aware of its arrival. AOL made this trivial moment into a soundbyte of the nineties. Being on the grid and being connected amounts to nothing if you're not checking your mail. And that goes for IM, texting, discussion boards, and chatrooms also. The point here being that connectivity comes at a certain price paid by each of us in the form of attentiveness and presence. We practically have to be as "on" at the network itself.

Transitivity

Transitivity describes our availability to communication through technology, and in particular, the network. Phone calls are for the most part point to point. (Though we could, who makes social conference calls?) Email and other networked technologies, however, excel at "group" interactions. Group addressing and cc'ing are certainly some explanation for this. It's cheap and effective. And quoting somebody in conversation is a simple matter of forwarding—no introduction required.

Transitivity in network terms describes a node through which communication travels. It obtains a curious twist when we use it to characterize social behavior. For it now suggests that there's a way in which we're all nodes in a network of communication, and whose flow we either pass along or not. The concept's an interesting one, because in asynchronous

media, social phenomena depend upon transitivity of groups and individuals to the communication flow. Viral and word of mouth advertising depend on this effect, and rather than spam everyone with messages rely on individuals to pass them to friends instead. (The difference is extreme, but that's another discussion.)

- How transitive are we to the flow of networked communication?

- How important is our active participation to keeping flows of communication going? Can we keep flows of communication going without active participation?

- Does the flow of communication through a technical network necessarily correspond to a social network? Can traffic on networks be read as an indication of activity within social networks?

- Is there correspondence (and if so, how close) between activity in a network and relations among its members? Do more active networks suggest close friendships? Do thinner networks suggest looser ties?

- Does the speed of message propagation through a network provide any measure of social relations?

- Can we assume that communication speed corresponds to levels of trust between those involved?

- Might the speed with which communication flows through a network be relevant from the perspectives of marketing or sales?

- Variations in network transitivity would seem to correspond to levels of trust and also activity within a network. Is the trust established among members of online and email lists and groups validated, violated or tested by the transitivity of certain kinds of communication?

- Is there value to individuals who pass messages along? Is there less economic and cultural value in those who don't?

- If we value those who communicate frequently and effectively, what are some implications for the adoption of communications technologies?

- Do highly effective and speedy social networks indicate a high degree of trust among members?

Second order availability issues

We're obliged to return or at least acknowledge an incoming call or message. Or are we? What used to be common practice and courtesy would be downright maddening if it applied to all incoming messages. So we build conventions. In the case of asynchronous messaging

technology, we face the unique challenge of not being able to acknowledge an incoming message without sending an additional message. To simply acknowledge a greeting, communication doubles. ("Wassup?" "Hey, got your message. Busy now but I,ll shit call you later when I have a min") Even the "I'm away from my desk" message included with IM applications begs to be customized. (What use is a machine apology? By definition, machines can't apologize…)

This fact of living with so many communications technologies is interesting insofar as it drives us to be explicit in our availability for interaction. There's no implicit way of signaling our current state of availability. Not knowing how a new communication technology works, we develop customs, practices, habits, and etiquettes. But these are constantly changing. (There was a time when Mom used to call to let me know she's sent or received an email.) Where's the appropriate burden of adaptation? With the designers and engineers, the UI experts, or the consumers?

- How do we convey to others that we are available or not for communication? That they should or shouldn't attempt to reach us?

- Would we have use for features of media or applications that would enable us to communicate this implicitly?

- To what extent does the connectivity of communications technologies create a new set of availability issues for which we are inclined to develop new codes of conduct?

- How can we and do we use technologies to find out if a person is available for interaction by some other means?

- In what cases do we float an email or text message to find out if a person is available?

- To what extent does the fact that we can do this create issues? Can access lead to relationship and communication issues? What do we do to manage them?

Closure

Just as it is difficult to convey our availability (or unavailability) to others through technology, it can be difficult to bring conversation to a close. In face to face exchanges, we can look at each other while wrapping up; that allows us to reach a kind of emotional closure simultaneous with the ending of the conversation. But through the screen, be it in email, texting, IM, chat or otherwise, we simply disappear. The consequences are often more confusing for others than for us. Where'd they go (Did they really go? Are they lurking?), should we feel slighted? Am I projecting or did she just duck out of that chat? You can imagine where this would go if we applied it to online dating!

- What kinds of habits and practices have we created in order to close conversation when we're using asynchronous media and applications that use them (e.g. email, chat, instant messaging, and text messaging)?

- To what extent has the fact that text messaging applications don't provide the option of hanging up, and thus brining interaction to a proper close, created new ways of stretching out interaction, continuing conversation, and simply staying in touch?

- In what ways is the open state of conversation facilitated by asynchronous media beneficial, and in what ways is it difficult or stressful?

- At what point does an asynchronous exchange fade away? How do we know when it has?

- How much communication do we dedicate to determining the status of a round of talk?

- How much communication do we dedicate to keeping channels open, even when there's no immediate need to talk?

Delivery acknowledgment

How many of us have received "did you get my email" phone calls? A medium in which users resort to a different mode of interaction in order to get that kind of guarantee is a new medium. We no longer bug each other for that kind of verification (though we might if spam keeps up its pace). Delivery acknowledgment is a fundamental aspect of messaging technologies, and yet one that we are learning to do without because we are adapting. Adapting either to accept more risk and uncertainty, or by placing more faith in the technology that absence of evidence is not at all evidence of absence… What's interesting here, besides the suggestion that over time we're accepting technology deeper and deeper into our worldview, is the kind of ambiguity and uncertainty that users deal with, and either resist or accept.

- Does a medium or application provide information about the delivery of a message? How is it provided? How much user participation is required to obtain it?

- If not, do users take steps to verify delivery?

- In what kinds of situations does the lack of delivery verification cause us to use other media or applications for communicating?

- How much trust do we invest in a technology's ability to successfully deliver messages and to deliver them without message degradation?

- In what circumstances are the risks that a message is not delivered, or delivered successfully and on time, high enough that communication opportunities are lost or forced to other channels?

- Which media and applications cannot guarantee message delivery for technical reasons? Which applications cannot provide delivery status information? How important is it that these improvements be made?

- To what degree does delivery status information correspond to whether or not a message has been read?

- Is the acknowledgement that a message has been received and read something that can only be provided personally?

- To what extent do we develop a convention of understanding with some individuals or types of contacts that messages have been received and read in spite of the lack of acknowledgement?

- To what degree do people in some occupations or circumstances struggle to keep up the demands on their time required to prevent communication from stalling?

- How do we compensate for inadequate information about message delivery or reception?

- How much do uncertainties around message delivery shape our communication choices?

- Within a given application, how can message delivery be made more robust or reliable?

The Encounter

In face to face communication, an encounter is defined as an interaction among participants present to one another, and occurring over a period of time that is framed by a beginning and an ending. Mediate an encounter, however, and our definitions lose their grip. When does conversation on a discussion list end? Who, at any given time, are its participants? When is a chat finished? And what is a conversation carried out with text messaging? (A chat? A whisper? Codetalking?)

These issues are interesting because we rely on the context of an interaction to help us through it. In all of our social encounters, it is critical that we know "what is going on" so that we can know "how to proceed." As generic and trivial as that seems, getting there of course involves knowledge of sophisticated cultural codes and practices. If mediation makes it difficult to determine the beginning, ending, and even participants of an encounter, how does that affect our ability to engage in it? And how do mediated encounters, because they differ from face to face engagements, present us with new kinds of interaction?

There are three key elements here: the identity of the talker, the talker's authority, and the identity of the animator (or who's actually saying the words).

Identity: Who's Talking?

In face to face situations, we know who's talking as long as we can see. Separated by the medium of technology, however, we can at best recognize, and worst only guess at the identity of our communication partner(s).

- How does a medium provide information to its users about who's talking?

- How trustworthy is this information?

- How does membership in a group offer certain guarantees of authenticity?

- Is bracketing of the physical self a productive feature of certain kinds of communication?

- Does it lead to interactions that address and problematize the self, identity, and issues of truthfulness and sincerity?

- In what cases of communication are there benefits to anonymity, insincerity, playing with identity, use of multiple identities, and so on?

- What mix of social and technical efforts are involved in securing the privacy of a mediated interaction?

- How important is group privacy? How do participants secure their interaction, in spite of a medium's ability to propagate interactions beyond their circle?

- How might privacy and security concerns impact future development and uses of networking technologies?

Identity: Authority

We rely on visible information to know the authority of the person with whom we're speaking. Police officers, doctors, teachers, lawyers, and other figures of authority tend to bear some resemblance to the cultural expectations established for that role. There's variation and personal style, of course, but the fact of the matter is that authority carries better when it's worn properly. Technology, as we know, often provides no suggestion, let alone guarantee, that an individual claiming to be this analyst or that insider is indeed who he claims to be. Insofar as we trust authority based on our experiences with it, the abuses facilitated by technologies might have serious consequences.

- What kinds of interaction are compromised by the fact that mediation creates ambiguities around the normative authority of the speaker (knowing the speaker's normative position with certainty)?

- Does the abuse of authority created lasting effects for the production of knowledge through mediated formats?

- Do examples of peer review, as adopted at E-bay, work to validate and verify authority?

- What limits on the enforcement of authority impact the development of online communities?

Identity: animator

It goes without saying that the words we say are in fact our own. That said, we quote others all the time, and not only to tell stories and jokes. From some points of view, the entire system of language serves to repeat what has been said before, if not to maintain cultural integrity, then to keep order in the house. Quoting has never been easier than with email. Entire conversations can be forwarded. Whole essays and articles can be copied, pasted, and propagated. And so the question of who's talking does actually become relevant.

- What practices do we develop around quoting, sampling, and forwarding one another's messages?

- How do we know if a message belongs to its sender or to somebody else?

- In what cases does knowing that our messages might be forwarded or quoted shape what we say, to whom we say it, and how we say it?

- Does the intrinsic ambiguity around the message and its author shape how we read and interpret messages?

- Are there greater consequences for culture in the proliferation of talk and communication wherein the message and its author have been separated by the medium and its means of propagating messages?

- How would it change communication networks if messages could not be forwarded or quoted without reverse approval by their authors?

- To what extent might the separation of message and author correspond or reflect the separation of product and manufacturer? Is this no the phenomenon of commodification currently threatening the music industry?

Audience Relations

Even if we don't know the people we're speaking to, face to face situations allow us to make educated guesses concerning their relationships to one another. We can draw on their body language, facial expressions, dress, and other cues. Aware of it or not, we use

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that information during the course of own interaction. For a social interaction is as much about the relations between participants as it is about content of what is said.

This gets complicated when technology makes us invisible. And technology often conceals our relations with each other, too. Take email, and the ease with which we can "blind copy" and forward messages. Who's to say with certainty where a message may end up? Not knowing our audience with total certainty, do we self-censor our communication?

- In what kinds of mediated encounters does the absence of information about relations between participants produce conversation designed to tease that information out?

- What are participants' relations to one another?

- How well do they know each other, if at all?

- To what extent do relations among participants inform the kinds of exchanges they might have through the medium or application?

- To what extent do existing relations among participants in a mediated exchange soften the effects of mediation, create opportunities for play with the medium, undermine the experience for newcomers, and so on?

- How have participants been brought together (by each other or independently)?

- What defines success in this encounter for each participant?

- Does successful interaction depend upon participation of all participants, of most, or of a few?

- Are the outcomes of the interaction shared by all those involved?

- Are the outcomes dependent on a consensual form of communication?

- Are outcomes obtained by strategic communication, that is manipulation, deceit, ruse, and so on?

- Are normative positions (authority) compromised by use of mediation for interaction?

- Can normative relations be maintained through mediation? Can they be extended through mediation?

- Do existing audience relations generate certain kinds of side play among participants in the form of comments and remarks, directed in one to one exchanges?

- What effects do these kinds of exchanges have on interactants? Do they reinforce relationships among participants? Do they undermine relationships among participants?

- To what extent do media build relationships between individuals and companies?

- How would we measure the strength and power of these relationships?

- Do relations maintained through mediated marketing efforts, but not involving two-way communication, constitute relationships?

Framing: Synchronous media

Because synchronous technologies permit us to negotiate interactions in real-time, we can play more with the context of an interaction than we can when using asynchronous technologies. Phone calls have more presence, and their immediacy connects users in a more binding fashion to a kind of virtual co-location. This shared context may place constraints on us (to respect each other's physical location, for example), but in providing more to work with, it also allows us a greater range of performance. Joking, commenting, remarking, and other kinds of verbal play are much easier to conduct over synchronous connections than over asynchronous ones.

- How strong is the need for framing in synchronous media use?

- How does the need for framing possibilities constrain and enable synchronous media use?

- When using cell phones, we often begin with the question: "Where are you?" This is a framing move. It allows us to set the context of conversation to include the immediate physical context in which each of us is located.

- If framing moves are a natural part of interaction, how are they affected by mediation?

- How important is it over synchronous connections to still create context?

- How well do we accommodate one another's particular circumstances, and what new conversational techniques have we developed for this purpose?

- How quickly and effectively do these conventions spread? How global, and how differentiated are they?

- Are there common conversational gestures, specific to a medium but common across cultures and languages?

- What impact does this kind of competence have on how we choose whom we call and when?

- If framing and framing moves are a part of cultural and social production, are we creating new kinds of phone and messaging tact? Are we losing some of our competence with face to face tact?

- What difference do the body and face make in this regard?

- How often do we choose not to take a cell phone call in order to avoid awkward framing maneuvers (e.g. being forced to sit in the car or stand in the doorway to continue a call..)

- Are we becoming used to conversations styles that conform to and even anticipate abrupt endings?

- What effect does subjecting interaction to sudden shutoff have on the nature of an interaction itself? Do we steer clear of quality interactions in order to not have to suddenly close the door on them?

- How critical is the sign off, or point of closure, in synchronously mediated communication? Is its importance in conversation changing?

- How much of the goodbye is affective, personal, and how much is convention?

Asynchronous: Framing

It would seem that asynchronous technologies of communication, by bracketing physical place and context from the interaction, render it irrelevant. But context still plays a prominent role in many online and other kinds of interpersonal or community interaction. It does it perhaps more through language and conventions established by the participants involved. Any online community with enough history will have a character of interaction, and unspoken conventions that help its members second guess each other's communicative intentions. Asynchronous technologies require users to be explicit about context that everyday interaction simply provides implicitly. We cannot say yet whether this is a side effect of learning how to use a medium. That until we have developed familiar and recognizable cultural practices, we are required to state and make them by explicit means. Until we do know, we can only inquire into the observations we're able to make about the function of context in asynchronously-mediated interaction.

- Do asynchronous technologies deal with framing issues, though framing is in effect irrelevant because there's no face to face and real-time interaction going on?

- If the framing of social interaction involves drawing upon context and conventions often belonging to place and occasion, what do asynchronous interactions miss out on? in their dislocation from face to face and co-temporal interaction, does the absence of these framing cues dramatically constrain or empty out interaction?

- To what extent is the content of interaction obtained from framing cues and context?

- To what extent is the form of interaction obtained from framing cues and context?

- Do asynchronous interactions develop their own kinds of framing techniques, conventions that point to media use and user practice as a substitute of sorts?

- Do asynchronous media require interactants to place more into verbalization itself in order to compensate for the trappings and props normally present in face to face encounters?

- How do asynchronous media in particular relate to the absence of framing's contribution to structuring interaction by temporal cues?

- What aspects of interaction are tied to temporal structure? And when bracketed from asynchronous interaction, are they lost completely?

Asynchronous: group dynamics

Insofar as we all mirror others (we're a social lot), group dynamics inform social interaction at a fundamental level. Psychologists point to the manner in which this "socializes" us, leading us to conform to social and cultural norms and expectations, and reflecting one another through interaction and communication. Communication, in fact, is an engine of sorts by which we maintain interpersonal relations *and* social convention at the same time.

Though there are many different kinds of online community and group interaction, asynchronously-mediated communication mitigates, if not frustrates, the transmission of cultural codes. This should interest those involved in communication technologies that not only serve to pass along information, but to reproduce any kind of organizational or social structure. At stake might be whether or not asynchronous communication technologies undermine social structure and context, or simply de-emphasize it. And in situations in which social or organizational hierarchy is critical to the effectiveness of communication, are asynchronous technologies up to the task?

- How does the bracketing of physical presence create particular challenges for group interactions?

- What cues can interactants use to help structure interaction?

- What benefits are moderators, and how effectively can they steer conversation and interaction?

- Are there still codes governing turn-taking in mediated group encounters?

- If not, what are some of the alternatives?

- How do participants take the floor? What amount of approval do they require in order to take the floor? And how do they keep it?

- How do private channels, private chat rooms, and instant messaging create new kinds of group interaction?

- How do they change the possibilities for interaction in group situations?

- What terms most accurately describe the phenomena of mediated group interaction? Are they gatherings? Meetings? Discussions?

- How does the particular challenge of orchestrating and directing the flow of attention among participants in a group interaction affect the kinds of statements people make?

- How does the competition for attention in a mediated environment like a chat room require use of different skills than those used in real life situations?

- Is there a tendency to act out in mediated group encounters?

- What kinds of sanctions and threats can be used against a participant to discourage him or her from getting attention at the expense of the group's collective experience?

- How is giving and getting attention structured in online group interactions?

- How much of the ways in which participants get attention depend on how well they know each other?

- How much depends on the medium itself? and on practices among a group of users with that medium?

- Do mediated group encounters tend to be more inclusive or exclusive of newcomers?

- What impact does having a "place" online to discuss affect conversation?

Footing

"Footing" describes the phenomenon of switching register, voice, perspective, or role in conversation. It's a rather straightforward way of admitting to the high degree of performance involved in talk or speech, for it recognizes that an interaction's meaning cannot be obtained from a linguistic analysis of the exchange alone. Words and sentences are not enough to capture the whole of a conversational exchange.

While some people are very adept at footing changes in phone calls, or have a verbal wit that survives email and chat, mediation generally reduces the bandwidth for changes of footing. It delays and screens the cues required for dynamic word play and for the use of

references that might exceed explicit and written statements. The impact of communication technology on footing should interest anyone who insists on rich interaction, be it for the sake of pleasure, play, persuasion, accuracy, or something else.

- How, and does a technology permit turn-taking opportunities?

- If it permits and people frequently create reference-response chains, in what ways are they transformed by the technology and by use practices around it?

- To what extent do we tend to carry out an interaction with the application or medium in which it was initiated?

- What kinds of confusion can result when we use different media and applications during an interaction?

- How important for our communication is it that we recognize where in a string a particular message belongs?

- What new kinds of sequences are possible with asynchronous media? In what ways do asynchronous media permit mult-tracked conversations? Out of sequence turns? Copying and forwarding to individuals not originally involved in an interaction? Permitting interaction to fade away? Engaging in bursts of near-live message exchanges?

- Are media transforming the ways in which we conduct conversations?

- What kinds of relations come of a deferred or more stretched form of turn-taking?

- What kinds of activity can be negotiated in this manner?

- To what extent do we now engage in more activities in which interactions and communication are stretched over time?

- Would it be correct to call these kinds of interactions "discontinuous?" Or are we developing new kinds of proximity, in which continuity can be stretched over longer periods of time without losing continuity?

- If so, are there substantial or only formal implications for interpersonal relations? What new ways of engaging in coordinated activity might we see?
How much stress is created by the temporal re-sequencing of messaging applications?

- What are some of the new kinds of interaction good for? What are they not good for?

- How do the bracketing effects of asynchronous media cause us to address issues of sincerity, normative rightfulness, and factual truth and accuracy?

- Are there new ways of supplying guarantees of these acceptability conditions?

- Are we developing practices and competencies in new ways of coordinating activity?

- To what extent can technologies embed some of these guarantees in the applications that use them?