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Designing Better Sociable Media

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ABSTRACT

The goal of this paper is to investigate the effects of technologically mediated communication on face-to-face conversation, and to propose improvements to the design practices of future sociable media through small-scale media experiments. Currently, developing research on sociable media myopically takes an atomistic approach toward design. In this paper I propose an example of a form of sociable media which responds, not at an atomized, individual level, but at a cultural level.

Categories and Subject Descriptors

K.4.0 [**Computers and Society**]: General

General Terms

Design, Documentation, Experimentation, Human Factors, Languages, Theory

Keywords

Sociable Media

1. INTRODUCTION

"How does technology interface with a user?" This is a central question for engineering that can only be answered by addressing a more fundamental question: "How does technology interface with culture itself?" In the last decade sociable media has introduced new means of social connection. As mobile devices become more pervasive and seamless, supplanting more traditional means of communication, and as society becomes more media literate, the everyday has become saturated by media. As new sociable media, such as portable devices and social networking sites, achieve cultural salience, they also introduce potential new problems. The generally perceived benefit of sociable media is an increased means of communication which has led to the creation of new social links. But is sociable media really augmenting communication?

Social networking platforms, such as mobile phones and social networking sites, allow people to efficiently maintain personal ties as these platforms continue to collapse geospatial and temporal constraints of conversation. However, as these technologies provide a new salience within existing social frameworks and appropriate the practice of face-to-face conversation toward new media platforms, it is essential to question sociable media's effect on face-to-face conversation. Moreover, it is imperative to design

sociable media that move in the opposite direction: to encourage and augment face-to-face conversation.

2. FACE-TO-FACE CONVERSATION

To be sure, media connects us in new ways, but at the expense of more traditional means, namely face-to-face conversation. For thousands of years, direct contact conversation has been a thread which has woven societies together. It continues to be the immaterial substance that binds existing cultures. In the face of new modes of communication, however, these foundations face erosion.

In unmediated conversation, language can be embellished by gestures, facial expressions, and vocal inflections which provide a qualitative richness unparalleled by any synthetic means of communication. Eye movement, smell and lighting contain subtle but significant nuances of voluntary and involuntary expression. Environmental factors and embodied language exploit the unique affordances of the human body in order to effectively and efficiently convey information.

With an excess of information comes an excess of noise, which social networking sites generally filter out; yet there is also a nether side of efficiency: qualitative loss. Replacing a manual task with an automated process reduces experiential space. As people adapt to new media platforms, what happens to the practice of face-to-face communication and the richness which accompanies it? This raises the question, how can we design future sociable media which preserves, and does not inhibit, face-to-face conversation?

3. INTERRUPTIVE MEDIA

Consider the scenario of a casual bar where the flow of conversation remains intact until a cell phone rings, destroying the continuity of the interpersonal exchange. The phone's announcement of an incoming call (or for that matter, an incoming text message) breaks the train of thought in the conversation. This is a common occurrence in many daily situations, be it within bars, coffeehouses, living rooms, on street corners, or in automobiles. The cell phone does not have the human capacity for judging the appropriateness of an interruption. The phone's infiltration of mediated conversation that was designed to connect us is, ironically, disconnecting us.

By design, current sociable media is inherently interruptive. Yet the original purpose for streamlining, automating, and optimizing tasks was not to create more work for ourselves, but instead to

liberate ourselves from laborious tasks, enabling us to engage complex problems, unnavigable by machines. As John Seely Brown states, "One perennial piece of punditry that never seems to fade predicts that information technology will free us all from the constraints of industrial society" [2]. But as the ethos of "more, better, faster" [7] becomes increasingly interwoven into our communication systems, it is evident that less work is not the nature of current sociable media.

Scholars of media concur that the very technologies designed to streamline our daily lives are often responsible for providing more interruption than ease. David Levy argues that "the accelerating pace of life is reducing the time for thoughtful reflection" [7]. Technology perpetuates the cycle, calling for further technological innovation. At this accelerated pace, little time is left for thoughtful reflection on the consequences. There is always the next product, the next experiment, the next gizmo. There is always the next email, the next text message, the next phone call. Indeed, the "pace of technology precludes a contemplative stance" [6]. As our media frameworks fragment our daily lives and thought patterns, they also interrupt us from the continuity of our social encounters.

According to Levy, the rise of new media platforms tends to favor "thinking that is rapid, productive, and short-term, and crowds out deeper, more deliberate modes of thinking and relationships" [1]. We have an inclination to gravitate toward what is simple and immediate. This is a primary reason why Facebook status messages, Twitter updates, SMS messaging, and email maintain their popular cultural role. As Levy has discussed regarding short-term actions, when ephemeral communication gets pushed to the forefront, access to more complex, reflective modes of interaction are stifled.

4. REVISITING WEISER'S CALM VISION

Media technology has traditionally been designed to interface with the individual rather than with an entire culture. However, media transfigure cultures through just such individual use patterns. Following from this logic, companies focus attention on creating sleek, sexy interfaces for the individual while tending to ignore the culture as a whole. "Unfortunately, technology has so far focused on the isolated individual, or has treated the person as just another cog in an information processing machine. The result is that current communications technology doesn't feel very good" [8]. But what does it take to create technology that "feels better"?

In the 1990s, Mark Weiser took on the feel-better problem when he suggested a need for calm information technology; frameworks that move "easily from the periphery of our attention, to the center, and back" [10]. We have moved on from Weiser's contribution. Even though many projects continue in the spirit of his vision, the majority of these projects have been "limited by the extent to which they have been able to program computers to act on behalf of humans" [8]. They focus on replacing (automating) rather than augmenting cultural activities. Such projects also focus on automation in a way which, unintentionally, removes us from experiential space. By truncating our experiential space, media detach us from the embodied environment. This corrosive paradigm has had its day. In a way, the significance of Weiser's vision of "calm computing" is rooted in his realization that our relationship to technology is more important than the technology itself [10]. In other words, technology operates as a substrate and

we wrongly focus on the objects rather than on the interactions that these products produce.

Distraction has been seen as an implicit metric of the calmness of technology. An obnoxious ringtone, for example, cuts through daily situations, calling our attention to the device. Even without making a single sound, Facebook is not calming because it plays upon our desire for social capital, in turn, enticing us to use it. We want to maintain our connectivity with each other, and sociable media gives us the most efficient means to do so. It does not respect our unmediated interactions, and consequently, interrupts our unmediated daily lives. But we should not single out Facebook; its insensitivity towards the cultural remains emblematic of all of our social devices. As Pentland asserts, "Computers are socially ignorant. Technology must account for this by recognizing that communication is always socially situated, and that discussions are not just words but also part of a larger social dialog. Successful human communicators universally recognize that communication is part of an evolving social process, and use this fact to their advantage" [8].

5. ECOLOGICAL APPROACH TO MEDIA CONSUMPTION

In order to design better sociable media we should consider an ecological approach. At its heart, ecology is the investigation of the relationship between an organism and its environment. Media ecology follows along parallel lines, exploring the relationship between media and their environments. In the case of sociable media, one of these environments is the existing unmediated social structure. In order to inform new social practices we must consider how they are effected by sociable technologies. For example, we turn off the faucet when we are brushing our teeth to prevent needless drops of water from going to waste. Why can't media prevent needless information overload and interruptions from polluting our lives?

In the past we have taken an ecological approach to media consumption. A ubiquitous part of American childhood involves parents turning off the television and telling children to do homework. This is an ecological approach which constrains our connection with a medium (in this case, the television) in order to maintain the experiential space of another activity. We also take a similar approach by silencing mobile phones in theaters.

Ecological strategies have also been implemented in the design of other media frameworks. Often these strategies have been retrofits. Do Not Call lists limit the disruption of unwanted telemarketing calls. Email spam filters shield people from unwanted information. Both of these strategies limit the frequency of interruptions created by media. This should be extended to the design of sociable media in order to maintain an ecology of interpersonal encounters. We must go further by informing people about their technology. We must move "from a mindset that wants to make the environment smart and proactive to one that enables people, themselves, to be smarter and proactive in their everyday and working practices" [9].

But should we really ask society to bend to the cause of technology at the expense of society's preexisting social framework? Pedestrians had to take new precautions with the introduction of the automobile, yet automobiles, the technical objects themselves, also had to change to accommodate the pedestrians. We should be designing technology that respects

preexisting cultures and all of their interpersonal interactions, mediated and unmediated. We should look at sociable media as a communication tool and not as a new cultural environment.

6.   CONTEXT-AWARE MEDIA

As sociable media accelerates social patterns away from ones conducive to sustaining face-to-face conversation, we must respond by creating media which acts on the behalf of face-to-face conversation. We manage our everyday interactions with social-awareness and applied cultural rules. We don't talk in the theater. We don't call each other in the middle of the night. We listen when others are talking. We are sensitive to how we interrupt each other. Although in face-to-face conversation we interrupt one another, these interruptions are not always corrosive. In fact, interruption is integral to dialogue. Current sociable media lacks this eloquence. So why can't we design social devices to act in the same way? Why don't our devices make use of the same social etiquette?

We need media that are aware of their users' situatedness. But current sociable media are situationally ignorant. They don't know if we are agitated, or happy, or sick, or even alive. Media that can take these problems into consideration and specifically design for them, will be better sociable media. This is easier said than done.

Alex Pentland provides a practical solution, demonstrating a model of socially-aware media by bringing in non-communicative human activities into mobile phone usage analysis [8]. Through an investigation of sensor data correlated to phone usage in campus settings, he has able to infer the cultural behaviors of his subject pool. An inference of these behaviors generates cultural rules which can start to be effectively applied to media. This is significant because it presents a context for richer media that might maintain the continuity of daily life by imbuing mobile phones with the decision-making ability to determine appropriate interruptions. The addition of context-awareness in mobile phone software enables existing cultural mores to be mapped onto social devices.

7.   AMBIGUOUS MEDIA: CULTURAL PROBES

Pentland's contribution provides a working framework for context-aware media, but its implementation distances itself from the users. It provides researchers access to the process while concurrently leaving the users out of the loop. It treats media use as a lab experiment while overlooking the fact that everyday social situations do not happen in labs but in uncontrolled environments. In this case, an open-ended approach could be effective.

"The ability for ambiguity to evoke personal relationships with technologies is particularly relevant as digital technologies are designed to support activities outside of work... After all, the everyday world itself is inherently ambiguous: most things in it have multiple possible meanings" [4].

For media to "feel better" it must avoid impersonal attributes within both utility and design. "Designing for pleasure demands a different approach from designing for utility. The latter can be done from outside a given situation, standing back to assess difficulties and seek solutions. The former, in contrast, is better done from within" [5].

Cultural Probes, a design-led approach which stresses empathy and engagement provides a useful alternative: "Probes are collections of evocative tasks meant to elicit inspirational responses from people—not comprehensive information about them, but fragmentary clues about their lives and thoughts" [5].

But the problem, as emphasized by William Gaver, is that people tend to rationalize probes [5]. "People seem unsatisfied with the playful, subjective approach embodied by the original Probes" [5]. Yet we must not be afraid of using ambiguity within media design processes. "Ambiguity can make a virtue out of technical limitations by providing the grounds for people's interpretations to supplement them" [4]. A major advantage of using ambiguity is that it "allows designers to engage users with issues without constraining how [the users] respond" [4].

8.   SMALL-SCALE MEDIA EXPERIMENTS: THE SOCIABLE PINT

As Pentland's work on social sensors demonstrates, an effective strategy for improving sociable media would require designing small-scale media experiments deliberately fitted for an intentional purpose or micro-culture. Rogers explains that the development of "small-scale toolkits and sandboxes, comprising interlinked tools, digital representations and physical artifacts [could] offer the means by which to facilitate creative authoring, designing, learning, thinking and playing" [9]. From these "sandboxes" new social information can be collected and used in a playful way. Rogers categorizes this as "playful and learning practices," [9] but she applies this idea primarily to experimental children's devices. We should be experimenting with media within all demographics and all situations within daily life. This is where my project, The Sociable Pint, finds its place.

The Sociable Pint is an inquiry, defined in terms of its overall goal of investigating the use of networked objects, not to further an impersonal trajectory of media, but to encourage and augment face-to-face conversation. Through the introduction of Pint-to-Pint (P2P) networking, bar glasses become social objects themselves, mapping onto the existing network of people in the bar, and in turn inserting a new layer of sociability within the space. By collectively networking pint glasses which are capable of sensing, recording, and interpreting gestural data, the project stages a direct intervention onto the social fabric within the bar space. The goal is to reflect patterns of how the culture of pint glasses might be used to find new ways of bringing people together without contributing to the content of conversation itself. In other words, The Sociable Pint monitors and enables without transforming the preexistent social fabric. This project stems from a perceived gap in sociable media design. Such a device can gather data on existing social conventions of unmediated communication, such as face-to-face conversation.

The Sociable Pint consists of a population of networked pint glasses capable of sensing gestural, temporal, and pressure data from each glass. Sensors embedded within each glass collect data indicative of how they are being used. Among other actions, the glasses can sense if they are being held, if they are being "cheersed," how they are being tilted, if they are being ignored, as well as their relative proximity to other glasses. Through the interpretation of sensor data, each glass has the ability to send

information via wireless transceivers to the other glasses in order to gain access to the entire system of networked pint glasses. In addition to reciprocating information among the glasses, each glass expresses itself through an RGB LED embedded in each glass. For example, glasses which are used in similar ways, glasses which are in close proximity of each other, and glasses which are "cheersed" together exhibit behaviors intentionally designed to induce conversation between the bar patrons. The information collected from the "culture" of pint glasses is used to facilitate interpersonal encounters within the bar space.

Informed by Weiser's vision of calm technology, the project is deliberately designed to avoid interrupting the pre-existing social atmosphere of the space. Combating an ethos of "more, better, faster,' the project does not cater to devices of an accelerated pace of life. Inspired by media ecology, its content is basic and almost impressionistic, limiting the flow of information to only a few sensors and one light. Considering context-aware designs, the project's design, although itself not context-aware, takes into account everyday interactions with respect to pre-existing cultural rules. By implementing a design process inspired by "cultural probes," the project takes advantage of ambiguity as a means of creating wonder and facilitating conversation.

But why does a bar merit this sort of inquiry? The bar is an appropriate space for investigation because it is where people go to socialize. Bars are designed with social interaction in mind. There are many forces at work which lower inhibition. Alcoholic drinks, lighting, music, and conversation with companions contribute to an environment designed for more relaxed and open social practices. The bar is a microcosm of dynamic social relations, always changing as people enter and leave, acting as a living, breathing organism whose mood transitions from hour to hour, from minute to minute, from place to place. A bar at 6pm is a different place than the same bar at 2am. Because of this, it is an appropriate site for testing experimental sociable media. The Sociable Pint seeks to take advantage of the social richness, dynamics, and unpredictability of the space.

Why use pint glasses as the object to be redesigned? Pint glasses are standard hand-held objects ubiquitous to bars. The standardized form of a pint glass is almost universal. Pint glasses appeal to a larger demographic of people than their higher class companions, the wine glass and the brandy snifter. Their ubiquity within all Western bar spaces makes them deployable to a wide variety of locations.

The Sociable Pint, as a Cultural Probe, does not emphasize precise analyses or carefully controlled methodologies; instead its focus remains on the cultural implications of media design and on the exploration of new design spaces. The Sociable Pint is concerned with exploring new understandings of media. It is speculative by design in order to explore functions, experiences, and cultural placements outside the norm.

The results sought in this experiment are not necessarily the quantitative assessment of how the glasses are being used. The number of cheers and specific states of the glasses can only provide implications, and not comfortable conclusions about social habits of the bar patrons. The dataset simply reflects too many layers of influence and constraint within an uncontrolled environment to be usable in a scientific context. But whereas most research designs attempt to disguise subjectivity in a process of controlled procedures, The Sociable Pint seeks to embrace it.

When results come in they are already incomplete, unclear, and biased. Instead of revealing and analyzing an "objective" view of the situation, the glasses capture the subjectiveness of situation. What becomes important is the implementation of this information to present simple and ambiguous links between other glasses to elicit people to converse.

Figure 1. The Sociable Pint

"By impelling people to interpret situations themselves, it encourages them to start grappling conceptually with systems and their contexts, and thus to establish deeper and more personal relations with the meanings offered by those systems" [4]. The users of the glasses are given a chance to become investigators of the system, a position typically reserved for researchers. Hopefully this will provoke them to communicate with each other in order to arrive at their own conclusions.

Ambiguity, in this case, serves as the cog which facilitates social interaction. The patrons are not given mechanisms behind the light patterns. All they can see is that glasses acted upon in a similar fashion behave similarly.

Further research is needed in order to determine how to best implement the networked beer glass software within a public setting. Different scenarios of software design need to be explored, including ones that implement game scenarios. These scenarios will be directly informed by previous system testing. The population of glasses within the network must also be increased so that everyone in the space can have access to the network.

9. SUMMARY

By design, the media surrounding us also interrupt our daily activities and the continuity of our social exchanges. Their design is not sensitive to the preexistent cultures that they infiltrate. This is a problem because our face-to-face exchanges make up the fabric upon which our culture has been built. To decrease the quality of our face-to-face exchanges therefore has an effect on how our culture operates.

In order to design better sociable media, we must take this problem into account and investigate new strategies and media designs that act on behalf of face-to-face communication instead of against it. We can do this by inoculating and educating people about their media practices, designing small-scale experimental environments, exploring context-aware media environments, and

partaking in experimental design practices that encourage and augment the continuity of face-to-face interaction.

10. REFERENCES

[1] Bollier, D. 2009. "More Better Faster!": How Our Spastic Digital Culture Scrambles Our Brains. http://www.alternet.org/story/140982/%22more_better_faster%22:_how_our_spastic_digital_culture_scrambles_our_brains.

[2] Brown, J.S., and Duguid, P. 2002. The Social Life of Information, 2nd Ed. Harvard Business School Press, Boston.

[3] Dunne, T., Gaver, W., and Pacenti, E. 1999. Cultural Probes. Interactions (Jan-Feb 1999), 21-29.

[4] Gaver, W., Beaver, J., and Benford, S. 2003. Ambiguity as a resource for design. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (Ft. Lauderdale, Florida, USA, April 5-10, 2003). CHI '03. ACM, New York, 233-240.

[5] Gaver, W. W., Boucher, A., Pennington, S., and Walker, B. 2004. Cultural probes and the value of uncertainty. Interactions 11, 5 (Sep 2004), 53-56.

[6] Keller, E. F. 1983. A Feeling for the Organism: The Life and Work of Barbara McClintock. Henry Holt and Company, New York.

[7] Levy, D. M. 2007. No time to think: Reflections on information technology and contemplative scholarship. Ethics and Information Technology 9, 4, 237-249.

[8] Pentland, A. 2005. Socially Aware Media. In Proceedings of the 13th Annual ACM Internation Conference of Multimedia, 690-695.

[9] Rogers, Y. 2006. Moving on From Weiser's Vision of Calm Computing: Engaging UbiComp Experiences. In UbiComp 2006, 404-421.

[10] Weiser, M., and Brown, J. S. 1996. The Coming Age of Calm Technology. http://www.ubiq.com/hypertext/weiser/acmfuture2endnote.htm.