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THE SPECTACLE OF SPECTACLES

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Though Google Glass has not yet been released in the consumer market, the release of its beta version, and the prospect of its future debut, have evoked immediate scholarly and popular response. While resistance to technological innovation is hardly unique to Google Glass (Marvin,1997) this product has received pronounced scrutiny in the popular media since its announcement. There may be many reasons for this, but one possibility is that Glass represents an intrusive technology in a society already highly concerned with the erosion of privacy (Hong, 2013). Undoubtedly Glass signals a shift toward the embedded mobile technologies that many scholars consider unique for their ability to alter social behavior by affording networked connectivity to public and private spaces in previously unimagined ways (Ling, 2012; Campbell, 2013). But whether Glass is perceived to be an intrusive element in public spaces, and why it may be perceived this way has not yet been studied. Along with a group of researchers from the University of Illinois at Chicago I aimed to do just this.

After interviewing a random sample of thirty respondents encountering Google Glass in public for the first time with my research team, I discursively read those responses as texts per Ang (1985) looking for contained meanings indicating how Google Glass is perceived as a new element in public spaces. My research found that respondents' primary reaction to Glass was not that it represents a threat to their privacy, but that it may be a hindrance to interpersonal sociality- in public or in private. Given the high frequency of this response in the majority of interviews conducted by my research group, I choose to draw on the work of Debord in order to consider the extent to which Google Glass may represent a physically manifest example of the social distortion Debord theorized as "the society of the spectacle" (Debord, 1967).

My work adopts a critical cultural approach to address how the concerns expressed by our sample about the emergence of Google Glass may represent a new iteration of existing anxieties about the erosion of sociality in western society. In character my project will mirror the approach taken by Kellner, whose many works on the subject have delineated the various aspects of Debord's theory of the Spectacle by applying them to contemporary cultural phenomena in the cultural studies tradition (Kellner, 1995, 2003a, 2003b, 2010). Like Best & Kellner's work (1999), my study will extend the understanding of glass beyond media itself, as Frederico (2010) proscribes to apply its usage to things like space, as Lamb (2010) did, and to the paradoxical conditions for

modern machinery that Teurlings (2013) works to understand given its multivariate functions and affordances.

Whereas proponents claim Glass affords its users greater connectivity, a critical interpretation proffers that it affords them an artificial connectivity in lieu of presence in their already social environment. While Glass allows users to share their lived experience more seamlessly, it also allows its users to remove themselves from the interaction with their environment and those in it by filtering their vision through the medium of a screen and abstracting their life experience into data being absorbed, mediated and projected back to them.

As Debord chiefly identifies the Spectacle with vision and the moving away from touch, Glass privileges vision among the senses to the detriment of the full immersion of glass wearers in the world around them. This is not surprising given that vision, Debord claims, is the weakest and most easily deceived sense, and also the one that lends itself best to the conception of the spectacle as a social phenomena that prizes the appearance of things over the things themselves (Debord, 1967).

Thus Glass expedites the process of the "falsification of life" which Debord believes is achieved as a result of the society of abundance that exists in western civilization where commodity fetishism runs rampant (Debord, 1967). Google glass illustrates this because while it does not satisfy any real need on the part of its owner, it enhances the abstracted sense of need that is today highly associated with the affordances of technological advances. As Glass illustrates through its rhetoric of transforming the future, modern society has come to accept the notion that its continued development is conflated with a collective need for the development of new products that are in fact only necessary to keep us engaged with the social spectacle of technology itself.

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GLASS AND THE REVISIONING OF THE WORLD

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in a global age, 76-92.

After using Glass for some time, I found it valuable to embed the experience of it in theories of space and ocularcentrism that underpinned the discourse surrounding academic work on virtual reality (VR) in the 1990s (Rheingold, 1991; Biocca, 1992, among others), particularly within the context of work I have been doing in the area of Human Augmentics (HA), the merger of digital technology to augment human capabilities and senses (Kenyon & Leigh, 2011).

Ocularcentrism is essentially a given in VR. Its apprehension is by way of vision and its existence owes to increasingly sophisticated computer graphics engines. One way to critique VR is to situate it within a strain of thought coursing through modernity very clearly identified by Lalvani (1996) as:

...the powerful privileging of vision... represent(ing) a distinctive ocularcentric paradigm, quite different from the organization of vision in previous epochs. For instance, Heidegger has spoken of the ocularcentrism of the modern age as driven by a nihilism that reduces every presence to images and representations. Derrida likewise views the hegemony of modern vision as an attempt to establish a metaphysics of presence. And Nietzche, in turn, critiqued the progressive

endeavor to subjugate reality, to overcome otherness and difference, and to make everything present to the inspection of an imperial Gaze as resulting in the necessary production of a seductive illusion. (pp. 1-2)

The context Lalvani provides in his critique of photography, vision and the body illustrates the need to historically situate Glass both as ocularcentric technology and part of the body. What makes Glass compelling as a site for theorizing about new media of communication is that like the development of photography it intersects with the material world and social world in ways that implicate and coerce the body and mind, subject and object, virtual and real, to enter into reconfigurations of perception, presence, interaction and attention. Its ocularcentric nature obscures its embeddeness in and imposition on multiple senses. As Jonathan Crary noted in regard to the deployment of the visual as subjectifying, one cannot abstract one sense from the others without consequence:

Spectacular power cannot be reduced to an optical model but is inseparable from a larger organization of perceptual consumption.... The full coincidence of sound with image, of voice with figure, not only was a crucial new way of organizing space, time, and narrative, but it instituted a more commanding authority over the observer, enforcing a new kind of attention. (Crary, 1989, p. 102)

I am particularly concerned with Crary's notion of the formation of "a new kind of attention," echoing, as Lalvani wrote, "Foucault's methodological scheme of visualization (that) provides 'visibilities' – ways in which things are made visible during a particular period by the dynamic of knowledge and power" (p. 25). What Glass points toward, as a category of technology, and what I will explain in the proposed paper, is a new form of disciplinary assemblage, the visible, wearable, manifestation of "machinic subjectivity" (Jones, 2014) that implicates us in human machine communication at the immediate intersection of our interaction with nature and with others by augmenting our sense of sight and our sense of space. I will extend Carey's argument that, "as one set of borders, one set of social structures is taken down, another set of borders is erected" (2005, p. 453) to underscore that with every augmentation there is a simultaneous diminishment. In contrast to the social, political, geographic and other borders to which Carey referred, it is easier to see what is augmented than what is diminished. The question, then, is not how technologies like Glass are augmenting or diminishing reality and human perception but rather: How is the world being re-visioned.

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The Opacity of Google Glass in Interpersonal Contexts

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Introduction

Google Glass was marketed as a device aimed at "getting technology out of the way." Similar to prescriptive glasses that are designed to improve vision while minimizing intrusiveness, Glass was intended to augment users' views of the world without inhibiting their interaction with their environment, including other people. Google pulled Glass from production and distribution soon after its public release, and whether the company will reintroduce the technology remains to be seen. Before Glass was taken off the market, a team of researchers conducted field interviews and observations to better understand perceptions of Google Glass. Part of the data gathered during this research project focuses on participants' perceptions of Glass in interpersonal communication contexts. In this panel presentation, I explore how participants thought Glass would enter into face-to-face interactions. Although Glass itself has an unsure future, other companies are introducing similar wearable technologies. Research regarding Google Glass, then, is still important because it can inform our understanding of people's perceptions of emerging mobile technologies, particularly wearables.

Literature

Scholarship in communication and sociology stemming back to the early twentieth century has conceptualized of the role of technology in the communicative process as that of a medium through which messages pass (Guzman, 2014). This model has been particularly true in Computer-Mediated Communication (CMC) research (Gunkel, 2012).

However, scholars across multiple disciplines and epistemological and theoretical approaches have argued that technology is more than a medium with implications for self and society (e.g. Carey, 1989; McLuhan, 2011; Mumford, 2010; Pacey, 1983; Pinch & Bijker, 1984; Turkle, 1984).

Computers, in particular, challenge the conceptualization of new media as only serving the function of channel in communication because users can interact with digital technologies in the vernacular (Turkle, 1984). Through a system of natural language commands, icons, and other visual and auditory cues and messages, users can understand and control computers. Within the study of communication, Nass initiated a research approach that positions computers and other media as distinct actors in interpersonal exchanges (e.g. Nass, Steuer, & Tauber, 1994; Reeves & Nass, 1998). Within this paradigm, digital technologies are no longer channels, or only channels, but take the role of interlocutor once occupied by humans.

More recently, Höflich (2013) has built on Reeves & Nass' (1998) media equation by proposing a revised model of communication with social robots, a term applied to multiple technologies including devices and applications ranging from mobile phones to embodied robots (Sugiyama & Vincent, 2013). Most theories that position technologies as social actors or interlocutors are based on a dyadic model of communication. Höflich (2013), however, proposes a triadic model in which technology functions as both a distinct social actor as well as a mediator of human-human communication. The communication between the humans in the same social space is affected by the presence of a digital entity. I approach Google Glass in this presentation through Höflich's (2013) triadic analysis.

Method

This study is part of a larger project regarding people's perceptions of wearables and Google Glass prior to adoption. A research team conducted field interviews and observations of adults in a metropolitan area of a large city in the Midwest in 2014. Data was collected at the same time Google released its "explorer" versions of Glass to select users. The study protocol included asking people about how they would not use Google Glass. Participants discussed where, when, and with whom they would choose to engage with Glass or would decide to refrain from using it.

In analyzing the data that resulted from the field interviews, I focused on participant responses regarding interpersonal communication scenarios, defined here as one-on-one or small group interactions, and analyzed how participants imagined Glass entering into these social spaces. From these discussions emerge perceptions of how Glass enters into interpersonal communication between co-present interlocutors.

Analysis and Discussion

Many participants indicated that wearing Google Glass would affect their interaction with people around them. Some participants thought Glass could draw attention to the wearer, at least until more people adopt the technology, making him or her the center of attention. They predicted conversations regarding Google Glass itself would follow,

particularly from people who haven't seen or experienced Glass. Some people also thought Glass could help them juggle conversations or tasks with other people physically present with them.

However, many participants indicated that they would not use Glass in conversations with others because wearing Google Glass would be a distraction or breach of etiquette. For example, one participant stated that the person not wearing Glass would worry that the Glass-wearer was not paying attention to the conversation. Another participant thought that Glass would be simultaneously beneficial and detrimental to interactions. This participant stated that wearing Glass could be a conversation starter because it would gain people's attention but, after that, Glass would impede interaction because it would be distracting to the non-Glass wearer.

Regarding people's perceptions of their own interactions with Glass, some participants said they would only use Google Glass in private settings or for personal tasks because of the attention it could draw to them in public or the disruption it could bring to their interpersonal communication. Here the perceived use was not so much to communicate with others but to accomplish something or obtain information i.e. search the internet for a recipe. Although Glass was designed to have some of the same communication capabilities as a smartphone and other internet technologies, most participants did not list communicating with others as a Glass function.

Overall, while some participants think Glass can facilitate conversations, most people stated that Glass would be more likely to disrupt interpersonal communication with others or would be more appropriate in intrapersonal communication settings. Based on participants' perceptions of Glass, when a human interlocutor is wearing Glass in a face-to-face interaction with another person, the technology enters into our interactions with others becoming part of the social space, creating a triadic relationship (Höflich, 2013). Glass is not a neutral conduit through which information passes, but an active part of the interpersonal communication taking place. As participants conceptualized it, Glass, then, does not "get out of the way"; it is viewed as very much "in the way." I conclude by discussing how people perceive Glass to be opaque in a social context. Although modeled after eyeglasses, Google Glass is viewed as more of a digital technology, similar to the mobile phone, than an ocular prosthetic.

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Excavating Glass: How Combining Social Construction of Technology and Media Archeology Might Help Theorize Emerging Media Technologies.

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Release, Retreat, Reboot

Shortly after the release of Google Glass I joined a team to collect ethnographic data to capture initial reactions. At the time we started collecting data in early 2014, Glass seemed to be a promising new media technology. Within months, some journalists were already declaring its' death. Google ceased producing Glass less than two years after first releasing the prototype. As I am writing this in July 2015, Google currently plans to continue development of Glass with a potential commercial re-launch in the future. The release, retreat, and potential reboot, as is popular with Hollywood films, portends an interesting story about the construction of an emerging media technology but offers more. It embodies a genre of technology that intimately blurs the boundaries between bodies, screens, digital spheres, and physical spaces – intersecting other technology, literature, art, and popular discourse. Imaginary mediatic progenitors shaped its' reception and perceived use. Users and spectators found the materialized form wanting.

Google Glass is a media technology that serves as a compelling case study challenging dominant notions of media and media theory by opening novel structures and forms of communication. The question is how to make sense of Google Glass.

Heeding a call made by Gillespie, Boczkowski, and Foot (2014) to move beyond "the obligatory rejection of technological determinism (and beyond an uncritical embrace of social constructionism)" (p. 16), I will combine approaches from STS and Media Studies to make sense of Glass. Specifically, I will begin to discuss how Social Construction of Technology (SCOT) (Pinch & Bijker, 2012) and Media Archeology (MA) (Parikka, 2012) could be combined to provide richer theoretical and methodological tools to explain the development of media technologies and associated forms of communication.

Construction as Excavation

The social construction of technology (SCOT) model developed by Bijker and Pinch (2012) offer insightful ways to understand the development of technologies, how some succeed over others, how they come to be meaningful in certain ways, and how these meanings shift and ultimately influence their (re)design and use. The model consists of first identifying relevant social groups that play a role in the process of the development of a technology. Their early model suggested that social groups be defined by those sharing similar meanings, "attached to a specific artifact" (Pinch & Bijker, 2012, p. 23). By identifying groups that debate the meaning of particular artifacts, researchers can identify the debates that drive certain technologies to success and others to fail. Groups usually emerge as they identify a problem ascribed to the introduction of a particular technology, whereby alternatives are suggested. In addition to identifying relevant social groups, "Interpretative flexibility of a technology must be shown," meaning "not only (is) there flexibility in how people think of or interpret artifacts but also that there is flexibility in how artifacts are designed" (p. 34). Finally, the model provides a way to identify how technologies become stabilized and dominant, cutting off the potential for alternative technologies to be developed in their place. To do this, they lay out a way of mapping the debate between relevant social groups and tracking it until the debate becomes stable. Relevant to this project, SCOT could be conceptualized to help explain the emergence of communication practices associated with particular technologies and unpack the co-shaping processes that take place.

However, by focusing on the impact that relevant social groups play in the development of technologies, SCOT does not account for the influence that media culture plays in affording potential developments, adaptations, and uses. It is critiqued as not acknowledging the influence of larger social systems (Russell, 1986). It is unable to grapple with how media cultures across space and time influence groups involved in constructing technologies. And it tends toward being uncritically socially deterministic. Media Archeology as defined by Parikka (2012) helps fill these gaps by identifying cultural conditions for the existence and perceptions of media technologies. MA acknowledges the way media technologies and practices are folded together throughout time. It provides the tools to understand unfolding meanings ascribed to technologies that influence the construction of current media technologies in ways unconscious to designers, developers, users, and other groups. It focuses on tracing political and

critical genealogies associated with media technologies to describe potential social reactions and consequences. And importantly, it insists on medium-specificity that recognizes the role of technology in affording perceptions that impact the media technology's own social construction. In doing so it provides a corrective to the sometimes over-deterministic nature of SCOT.

Unlike technologies that have been black boxed, Glass remains open to some interpretive flexibility (Pinch & Bijker, 2012). Because researchers tend to study technologies only after their meaning and societal status have become stabilized, they often miss the debates that brought them into being in the first place and in doing so misunderstand how they are involved in and are the projects of a process of social construction. They also fail to capture the communicative practices afforded by these technologies. Practices that also play a role in the construction process. By conducting ethnographic interviews and tracing debates about Glass as the technology developed in the early stages, this research played a role in documenting the construction of Glass as it was taking place – capturing the rich tapestry of discourse that surrounds an emerging technology that individuals do not quite know how to make sense of or what to do with. However, focusing to narrowly on the current moment precludes recognizing how the construction of Glass is influenced by a tapestry of other technologies.

Excavation as Construction

Media Archeology helps close the SCOT gap by providing tools to consider Glass in relation to the historical social construction of other media technologies. For example, focusing on the development of eyeglass technology provides insights into the construction of Glass because Glass is associated with eyeglasses in a number of conscious and unconscious ways. Historical social reactions to the popularization of eyeglasses in America at the turn of the century seem to predict some of the reactions to Glass recorded in our ethnographic interviews and popular media. As just one example, eyeglasses, which were originally intended as functional items to correct vision, quickly transformed into fashion objects, sometimes with little corrective value (Segrave, 2011). The construction of glasses as a fashionable technology arguably influenced critiques of Glass as functional, useful for specific types of jobs like those in the technology and financial sector, but unfashionable. In reaction, Google quickly teamed up with the fashion industry to produce something more aesthetically appealing (Wong, 2014).

Combining approaches developed in SCOT and MA recognizes emerging media technologies as co-constructed in multiple sites, by multiple social groups, at multiple times, and that the construction of one technology plays a role in the construction of other technologies. My contribution to this panel constitutes a work in progress in which I attempt to offer a more layered explanation concerning the construction of Google Glass, associated forms of communication, and of emerging media technologies more generally, while exploring whether "the real power of the intellectual connections between STS and media studies will ultimately be theory that moves beyond "determinisms" to capture the multifaceted complexity of technology as *communication* made durable" (Lievrouw, 2014, p. 50).

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SCUBA DIVING AND JACKHAMMERS: GLASS AS MASCULINE-SENSUAL PERFORMANCE

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Paratextual Explorers

Google Glass, in its Glass Explorer iteration, never achieved the status of mainstream consumer product. However, the processes of purchasing, using, and developing applications for Glass have been, if anything, over documented in media artefacts that are seldom carefully considered because of their peripheral nature to the Glass itself. These paratexts (Consalvo, 2007) include, but are not limited to, the packaging and various instruction leaflets included with Glass, YouTube unboxing videos, and https://developers.google.com/glass/.

I consider these paratextual spaces as crucial to understanding the product that Glass wished to be understood as, our imaginations of it, whether or not it ultimately lived up to this ideal. Published and distributed by both google and by Explorers themselves, these texts contribute to a masculine performance (Butler, 1990; Connell, 1995) that blends humor, consumerism, and notions of tech-savviness. Our research group's ethnographic work with Glass in an urban environment reinforced these positions. Perceptions about who might wear Glass centered on those with financial resources, who also wished to be publically seen as tech-savvy. It is a performance of masculinity that does not rely on an explicitly male body (Halberstam, 1998) and perhaps deliberately uses gender neutral language. However, these paratexts can suggest, quite deliberately, who should be using Glass and how it should be used.

After all, the Glass packaging tells the Explorer "you are a pioneer, a founder and an architect of what's possible." Emphasis is placed on the active, creative, conquering, masculine, role the Explorer may to adopt through their use of Glass, instead of its originally intended position as a(n eventual) consumer electronic device. This message is printed on a stark white, 4 ½ inch by 1 ¾ inch sliver of cardstock fitted inside an equally delicate white cardboard sleeve. To say that the packaging is like that of Apple products (Estes, 2013) is both accurate and a bit reductionist. Such statements do not convey the actual experience of interacting with the packaging. An experience that is, more and more frequently with consumer electronics, carefully orchestrated (La, 2014). Filled with contrasting black-and-white components of varying textures and weights, the packaging pieces are strikingly sensuous and tactile for a product that it intended to operate largely hands-free. The matte black surface inside the lid, with white text and sketched images of how to start out using Glass through its touch interfaces, is simply velvety.

Aesthetic Labor, Sensual Unboxing

In marketing, aesthetic labor is typically performed by women for the comfort of all genders. Sectors such as retail and leisure project a feminine, or nurturing, aesthetic through the hiring of female employees (Stevens, 2012). In the airline industry, where flight attendants become the product sold to the consumer (Spiess & Waring, 2005; Warhurst & Nickson, 2009; Witz, Warhurst, & Nickson, 2003), this facilitates environments where sexual harassment and the invitation to touch is acted upon (Spiess & Waring, 2005). Of course, Glass packaging is not a flight attendant, but the invitation to touch, to feel, is marketed to the consumer through the packaging (La. 2014). Isabelle Olsson, lead industrial designer for Glass and its packaging, describes the unboxing process as a bit of a tease. "[The frosted glass-like vellum paper] was one of the hardest things to find." It could not be "too transparent that gives it all away, but not too opaque that you couldn't see anything" (Olsson, quoted in La, 2014). Glass' packaging is an invitation to touch, to explore, and from the FAQ questions included in tiny gray type inside the crisp little cardboard sleeve, to operate a jackhammer, play one-on-one, or go scuba diving, but probably without wearing Glass. It is a joke, but only just barely.

This sensual performance is carried further in the practice of publishing unboxing videos, where the purchase of Glass leads to the labor of recording and editing, which

then can then be monetized by the Explorer/YouTube partner, albeit still through google's ecosystem (as YouTube is a division of Google, inc.). Being an Explorer means performing labor and sharing that labor, blended with entertainment value (Scholz, 2012).

Dan McLaughlin's video "Glass Unboxing"

(https://www.youtube.com/watch?v=YliQxNIvCts) is a typical example of the unboxing genre. Though McLaughlin has under 3,000 subscribers to his YouTube channel, his unboxing video boasts over 700,000 views. The video is ad-monetized and McLaughlin is compensated for views. Through the ten minute video, McLaughlin narrates his process of taking Glass out of the branded bag, going through each layer of the box, using his hands to touch, to point, to manipulate the product. He comments upon the textures of the cloth storage bag, the cardboard inserts, the AC adapter. Handling of the packaging takes center stage over the product itself. Where the technology may be unable to live up to expectation, there is comfort in the literal black and white linearity of Glass' presentation as product. Marketing communication is simply one aspect of packaging design, and must be weighed against other concerns (for summary of packaging design research, see Azzi, Battini, Persona, & Sgarbossa, 2012). However, the prevalence of unboxing videos, particularly for specialty consumer electronics, points towards extending packaging as a marketing device beyond traditional advertising venues.

Your Labor is Beautiful

"Google Developers (https://developers.google.com/glass/) acts as a gateway for both the experienced Android developer and the beginner. Consisting of dozens of subpages and branching tutorials, the site emphasizes Glass as something one does. The opening image is one of the active Glass user, not the developer behind a non-Glass computer screen. Instead one sees a white male, leaning forward, wearing a helmet and Glass, complete with included attachable sunshades. It's not scuba diving or jackhammering, but it is also not the reality of development presented on the other side of "Developer Overview."

With hundreds of hyperlinks, the Developers site offers aid to the Glass tinkerer and experienced application developer alike. In addition to the resources, lines of programing that can be copied, pasted, and modified by the app developer, there are pages that address questions of style and language. When crafting text for Glassware, developers are encouraged to "Be friendly." Friendliness is defined by "contractions," use of second person ("you") and emulating "casual conversation." Earlier, on this same page, the invisible "you" to whom the developer speaks is defined as "smart and competent," who may be unfamiliar with both "technical jargon" and "may not speak English very well." The developer is encouraged to write for a person they want to talk to, an absent social partner, known only through the Glass.

Glass paratexts such as these raise questions concerning consumerism, labor, technology adoption, and gender performance. This presentation, as part of a larger Glass panel, can only provide a brief overview of a few of the places these themes emerge and where they intersect with additional Glass discourses.

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