
Pederson, Isabel. *Ready to Wear: A Rhetoric of Wearable Computers and Reality-Shaping Media*. Anderson, South Carolina: Parlor Press, 2013.

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Something unexpected happened as I was preparing to review Isabel Pederson's *Ready to Wear: A Rhetoric of Wearable Computers and Reality-Shaping Media*—I received an e-mail inviting me to buy Google Glass (at the time of this writing you still must register on the Glass Explorer's site and be "chosen" by some sort of randomization engine to receive a code that enables you to buy Glass) and within 48 hours my Chair, Dean, and University President had agreed to pay for a pair to be used in my Digital Writing course this spring. The technology discussed in *Ready to Wear* was suddenly less theoretical—I had four weeks or so to learn how to create augmented reality within a pre-written application for Glass so that I could teach my students how as well. My plan was to have them create augmented reality pop-ups that could be viewed on mobile devices, including Glass, for local museums.

While re-reading the text to prepare to write this review, I was interrupted by Glass letting me know that a news story was just published revealing that a 3-D printer for food will be released in the next year (Daileda) and then again to let me know about an incoming winter storm. I write from a place of experiencing the book at the same time I was trying to master a new technology that, while supposedly "natural," has a very different interface than those I was already adjusted to using. By juxtaposing the two, I will illuminate the strengths of the rhetoric of wearability that Pederson weaves as well as suggest places where real experience with these emerging technologies will likely augment her theories.

Although the title is *Ready to Wear*, not everything Pederson writes about is wearable technology (some is implanted and some simply carried). What all these devices do, however, is shift our reality in some way. She defines "reality shifting" as any technology that makes a claim to augment our real world with some virtual aspect—reality shifting devices are those in the business of creating augmented realities (2). Augmented realities are those wherein one "reality" is overlaid onto another—so a virtual reality world is somehow placed on top of what you are already seeing, feeling, smelling, etc. These technologies are different from those that come before them in many ways, with Pederson concentrating specifically on how they differ in the rhetorics that surround them from other technologies.

As such, *Ready to Wear* is not a book about the rhetoric created by wearable technology; instead, it is a text that analyzes the rhetoric that surrounds such technologies—especially those still in development. Pederson is interested in technologies like head-mounted displays (HDMs) and invisibility cloaks that existed in our social consciousness, movies, and writing long before they become a lived reality. The book really looks at the rhetoric surrounding these devices from what they are called and how they are written about, to how they are advertised and even imagined (in the case that they do not exist yet). What is missing is the rhetoric that the devices themselves create in the instances in which they actually exist (though of course in many cases this is because the devices were not available publicly at the time of the writing or may never be put into production—she is writing about the virtual rhetorics of virtual devices for overlaying virtual worlds).

To look at these devices and the multiple virtual dimensions created around them, Pederson borrows and defines a number of terms from Burke, Bolton and Grusin, and a handful of others. Because these devices are stuck in a state of becoming (for Pederson anyway—using a Glass while reading about it as an upcoming product was a bit of a surreal event), it would not be possible for her to look at them as devices already in the public's hands, so she focuses on their consciousness before production. To do so she first employs some of Burke's terms "...for 'order' (Rhetoric 183-89)—the 'positive,' 'dialectical,' and 'ultimate'—as a triad and relates them to key rhetorical events and instances that occur—in the language of emergence surrounding inventions. Burke's triad exposes the transformative nature of rhetoric" (Pederson 19). "The positive" becomes important in that it creates and acts through naming—so it is important, for example, that we call an invisibility device a "cloak," and that our preconceptions of such devices have already been shaped by media as varied as children's literature (*Harry Potter* for instance) and science fiction.

With Burke as a firm foundation, Pederson explores concepts from other writers to further discuss how these technologies are positioned in western culture. Such technology does not particularly remediate old media again (as Grusin and Bolter argue much new media does), but instead is always looking to the future—and in that future we wear heads-up displays and can own invisibility cloaks. These devices are talked about now but will exist in the future. Furthermore, Pederson writes that the way we argue about these devices, the way we expect them, and the way that we seem to think of them as things that *will* exist one day has *premediated* them and caused them to always already exist in that future space in the ways we expect them to. From some of these other terms Pederson develops some of her own. For example:

I unite together these concepts—premediation, preemption, vision, and inevitability—to understand the rhetoric of reality-shifting media emergence.

I adopt the term *imminent* because it best characterizes the sense of looming closure inherent to the language of reality shifting. (*We will read people's minds. We will live forever. We will be invisible.*) Premediation implies a degree of forethought or will; *imminent* is more appropriate here because it suggests a blind march onward, an unquestioning belief that the future, already laid out, presupposes every act we perform. The rhetoric of imminence operates as an ultimate hierarchy that rhetors often use as a given that is simply accepted, a fallback position that is always already palatable to society when it comes to technology. *Ready to Wear* begins the process of unraveling this very assumption using rhetoric as the central method of disentanglement. (Pederson 27).

Chapter One also introduces the term *existenzmaximum*, a term developed by Paola Antonelli to relate the idea that tiny technologies (artifacts) can still have a “massive or fantastical benefit” (Pederson 33). She argues that *existenzmaximum* is tied up in the idea that mobility—mobile technology—is desirable in our society and the more mobile a technology it is the better it may be. There is a lot of *existenzmaximum* rhetoric throughout the book—nearly every device analyzed talks about how small, how mobile, and how life changing these technologies will be.

The first chapter discusses wearable head displays like Google Glass—which I was eager to read about having just received mine in the mail. Eye displays like Glass allow you to see a small computer screen at the same time as your normal visual field. Other head mounted displays (like one used by the military) are also discussed as well as, interestingly enough, digital tattoos. Digital tattoos in this case are those that are used in medical settings to monitor and display health information, but they are also available (if you have the money) as an implant that can display programmable pictures or as one that is only viewable through a cell phone or other mobile device. Yet another so-called digital tattoo runs on body heat and blood and works as a mobile device screen (Zyga).

Chapter Two focuses on invisibility cloaks and nanotechnology. Pederson is interested in why people are so accepting of invisibility technology—what does it mean to be invisible? Why would people need to be? Why is this technology (out of military usage) that we even need? Despite it not having much day-to-day usage, a dream of invisibility appears in human writings all the way back to Plato's *Republic* (Pederson 53). The idea of an invisibility cloak or clothing is so popular that a potential invisibility device was reposted and forwarded around the Internet in 2003. Since that time, several more cloaks and camouflage devices have been developed. To give an idea of the type of rhetorical detail that Pederson focuses on and finds interesting in this analysis, Pederson finds it interesting that we call these devices “cloaks,” for example. Cloaks are always removable—so our cultural idea of what an invisibility device should be

is one that is easily removable, not something that could potentially become stuck to us or render us permanently unseeable.

On the other hand, other devices discussed in the chapter—like the Nokia Morph—are thoroughly and permanently transparent. The Morph is a transparent tablet-like device that is entirely screen, however it is special because it can also be folded into a phone or even bracelet that becomes virtually invisible. In this way we can study and consider the way that people want technology that is sleek, flexible, and also only visible when we want it to be (Pederson 56-7). The Morph was part of an art exhibit, and a thorough analysis of the rhetoric surrounding that exhibit is shared. Pederson finds great interest in the idea that visual rhetoric surrounds the stories we are already telling about invisible objects (73).

Chapter Three looks at devices that allow people to control computers and other devices with their brain. Implants are actually nothing new—but early brain implants for controlling computers were not very precise or advanced. Unlike the other devices discussed in Pederson's book, neuro devices are more useful for those that are differently-abled (instead of less abled), which makes their inclusion here important. Additionally, these are the devices that are the furthest away from us in terms of being available to the general public, but the ones that are heavily predicted in their rhetoric:

I use the concept of imminence to explain a deep-seated rhetoric that I see operating across the discourses surrounding reality-shifting media. Imminence reflects the certainty that technological changes are inevitable and that subjects have little or no agency in that process. The term imminence implies that something is going to happen. It is imminent. While premediation suggests some kind of forethought by another party (e.g., government or a commercial entity), imminence simply implies that an occurrence seems utterly inevitable. This seemingly total devotion to technological changes operates as an ultimate, indisputable order in the discourse surrounding reality-shifting media. (Pederson 80-1)

In this chapter we can see fear reflected in some of the rhetoric that surrounds these devices as some reviewers of them talk about “thought-police” and not wanting to have their every thought available to everyone (or anyone) else via technology. A proposed device for determining the emotions of people who step onto airplanes, for example, could be used to deter terrorism (though I have to wonder what sort of emotion the terrorist is meant to have—excitement? Fear? Nervousness? Plenty of nervous fliers exist already and there is no information available about how they would be differentiated from the terrorists).

In Chapter Four, Pederson discusses augmented memory devices—those meant to record every (or nearly so) moment of a person's life. These devices

(especially when paired with neurotechnology) suggest that our memory is imperfect and play towards the human need to reach perfection (Pederson 106-7). Interestingly enough, because the book was written before Glass was released into the Explorer program, Pederson considers memory devices as being separate from other heads up displays, even though Glass certainly combines both. Thus, instead of considering a real, available device for total recall she can only consider those in movies and development.

Glass, however, has all but exploded the debate over public surveillance and public/private computer-based memories. Glass allows anyone wearing one to take pictures just by winking, and videos are also easily accessible by touching the side or saying a command. I, myself, have taken several senseless videos and unintended pictures by flipping through its menus completely by accident. Glass's message boards for users are full of stories of people being stopped in public and asked to remove the device—this seems to happen in crowded places like the mall or even public transportation—and users being shamed for daring to wear a camera on their face. In a Seattle diner, anyone wearing Glass will be asked to leave (Hickey). Nearly everyone who has worn it in public has experienced another person coming up to them and asking for it to be removed, and some have even threatened lawsuits if any pictures of them were taken without their permission. On the other hand, wearing this display will also mean getting to talk to plenty of curious people who want to know about it, try it on, and play with it themselves—so all the attention is not negative.

However, what Glass reveals is just how uncomfortable that the public is with being constantly surveilled for the sake of someone else's memory archive. Pederson writes about how external memory will allow us to "remember" everything—even things we would normally forget—and it will certainly be useful for those with memory-based disabilities and folks who just enjoy having pictures and video of everything in their lives to hand. But much like the rhetoric that surrounds external memory devices regales them as an unadulterated good, in only analyzing that rhetoric Pederson cannot touch the lived reality of the people who are early adopters and wearing this technology already—and being asked to remove it.

Chapter Five discusses the possibilities of our existing (and future) technology to enhance participatory culture. Drawing on the work of Henry Jenkins, Pederson shows how the iPod and iPhone were positioned to create the culture that Jenkins writes about and discusses the ways that their marketing campaigns encouraged this. Specifically, Canadians started a semi-viral campaign to get the iPhone's data plan cost reduced by one of Canada's major cell phone carriers. The capability of other devices to assist participatory culture are not as thoroughly discussed, however. One of the primary uses

that seems designed to be part of Glass, for example, is ones' ability to document easily almost any situation, and while that might be a problem for early adopters (such as the ones who report being told to take the device off) when it is more normal to wear strange glasses and a camera strapped to your face this will potentially become very useful for citizen journalism. In much the way that cell phone cameras transformed the number of pictures available for nearly any news event (and enable participants in online forums to do things like try to piece together pictures of an event like the Boston Marathon bombing to find the suspect—whether or not they are successful), wearables are likely to change the way that we view, record, share, and even investigate events. Not everyone agrees that more cameras are better, but these changes are *imminent*.

The *imminence* of augmented reality is what interests me about wearables. As I noted earlier, augmented reality generally refers to placing one reality over another—so if you are looking through your cell phone camera at a museum exhibit a text box might pop up that tells you more about the exhibit, gives you pictures of other related things, and might even let you click to learn more about the exhibit. In the coming terms my students will be building augmented reality exhibits for local museums and my campus. Some of them will work with Google Glass and some with cell phone technology—the choice will largely be with the student. Especially if cheaper displays can be bought without cameras, I can imagine these being of real use in museums—they are not very intrusive, can link lots of information to real world locations, and in Glass's case the speaker actually vibrates part of your skull to allow you to hear it so your audio tour will never interfere with anyone else's. Today if I wear Glass in public with the right App activated words in other languages will be translated for me (as well as simple signs in ASL), I will get tidbits of information about buildings that I pass and art on the walls of offices, and I can tag things in my immediate vicinity and share those tags with others. My students are developing games and museum exhibits (primarily through writing) that can be enjoyed by others with mobile devices. I might not have my hoverboard yet, but it is safe to say that I live in the "future" that Pederson writes about, complete with a new group of problems the likes of which I have never had to deal with before.

What I would like to see more of in *Ready to Wear*, though that would clearly be beyond the very clear boundaries of this text, is more research about the rhetoric produced by wearable devices. Perhaps my interest is guided by trying to learn to use a wearable and develop assignments for it at the same time as reading the text, but I wanted to shout: Wearables are here now—let's talk about what we can do with them! Despite that, *Ready to Wear* inhabits an interesting rhetorical space—studying rhetoric in the lull before these devices

are released. Instead of looking back upon historical rhetorics this book looks forward to future and current ones, but does not fall into a pattern of trying to make predictions about what the technology will do for us. Instead, Pederson carefully writes only of the rhetoric that already surrounds devices that do not yet (in many cases) exist in order to illuminate how our rhetoric shapes our technological futures.

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About the Author

Jill Morris is an Assistant Professor of English at Frostburg State University where she studies internet communities and video game rhetoric. She lives with two pomeranians and one cat--the pomeranians are enjoying using Glass but the cat is still unsure of the usefulness of this new technology in her life.