

# **Massachusetts Institute of Technology**

21A.500J/STS.075J Technology and Culture

**“*Glyph*” – A Step Towards Isolation**

Since Sony's first Walkman in 1979, headphones and ear buds have been integral technologies in almost everyone's life. Wearable technology, more generally, has been penetrating the market during the last few decades. As Jenkins says in *Look, Listen, Walk*, "You've seen them. Maybe you're one of them. They're the zombies of the New Media Era: the unthinking, the unseeing, the undead. They are all around us." (Jenkins, 2004). Wearable technologies have encompassed users in their own bubble and isolated them from their surroundings. One of the new wearable technologies in the market that is inspired by the simple headphones is "Glyph"; a mobile wearable theater designed by Avegant. This paper will focus on this new technology and its social dimensions including the consequences on users. The analysis of Glyph will rely on several theories of technology and culture as well as other studies and articles on wearable technologies.

Wearable technologies (wearables), as indicated by the name, refer to technologies that can be worn on people's bodies. Headphones, smart watches, glasses, and Cochlear implants are all among the many wearable technologies available in the market. The goal behind creating wearable devices is mobility and practicality. Designers advertise their ideas by convincing consumers that they could have this technology with them wherever they are, and whenever they are by minimizing the need for bulky systems such as screens, keyboards, desktop speakers, and so on.

Glyph is an emerging wearable technology, currently in its development stages, which consists of a headset for audio and a bar that slides over the eyes for video. Glyph uses a virtual retina display technology to provide the user with a top-notch virtual image. It does not require a screen, but instead it uses micro-mirrors and fiber optics to create a virtual image that Avegant's CEO, Ed Tang, argues is clearer and sharper than anything people have seen so far. (About the Technology, 2014)

First and foremost, the social dimensions of such wearable technology must be examined before diving in the potential of success of such device. A recent article was published in the *Tech Review* by Rachel Metz about Glyph titled *The Future of Personal Entertainment, In Your Face*. Metz describes the phenomenal experience she had using Glyph for the first time. In the “Why it Matters” section it says: “A personal entertainment headset may overcome some of the limitations of current computer interfaces,” (Metz, 2014) but this personal entertainment headset may also overstep on the social and cultural construct of our community. If every person will have their eyes and ears covered by this headset, they will inevitably lose any natural connection with the outside surrounding environment.

In *Fetishism of the Commodity and Its Secret*, Karl Marx defines Fetishism as making an inanimate object animate and argues how certain inputs (labor in Marx’s example) could become overlooked commodities (Marx,1867). This can be analytically expanded and applied to different scenarios. Glyph picture-forming technology is a visual reification, since it makes a picture seem real whereas it is entirely an abstraction. Also, Glyph as an overall product fetishizes entertainment by transforming an inanimate form of audio and video transmitted through bits and bytes to an animate virtual reality. The repercussion of this is the creation of an illusion of a sending-and-receiving relation that the user may think they are experiencing, whereas in reality users are mere receivers interacting with an inanimate object.

The PSFK report *The Future of Wearable Technologies* addresses wearables by looking at connected intimacy, tailored ecosystem, and co-evolved possibilities as the three categories wearables improve upon (PSFK, 2014). As a future wearable product, Glyph contributes to these three perspectives. First, the way Glyph is used with a bar completely covering the eyes as depicted in the figure above, one is completely isolated from anything and anyone around them, and thus limiting connected intimacy. While smart phones, regular headphones

and even laptops somewhat limit the person from interacting with their surroundings, their eyes are still able to look around. For example, while on a train using your phone or listening to music you can still look around and share glances with other people, and similarly when using your laptop in a coffee shop, you could still take a break from continuously staring at the screen. This allows the user to benefit from connected intimacy by succeeding in utilizing a new layer to personal relationships and interactions (video chat, texting and other methods of social online communication) while still enabling the user to exist in other social dimensions. On the contrary, Glyph, only presents a one-dimensional social construct that consists of the user. The user is quite literally blinded from their surroundings. Whether one uses Glyph to socialize, play games or watch a movie, they are not interacting with anything beyond Glyph, and this is destructive on different levels.

Metz describes her experience:

*“I’m watching a jellyfish pump past me lazily, its movement interrupting the twinkling of underwater particles, when a sea turtle suddenly swims my way and starts munching on the jellyfish’s tentacles...but the image in front of my face feels real enough that I cry out, ‘Oh, no, don’t eat that! That’s not going to taste good!’... The world outside my undersea environment is less dramatic” (Metz, 2014).*

This description of a first-hand Glyph experience conveys the idea of the fetishized reality of this technology. Metz admits that the world she is engaged in through her 3D Glyph projection is far more dramatic than the outside world. While it is important to have entertainment technologies that help us escape the whirlwind of the challenging reality, the effect of having this virtue as portable as Glyph is somewhat frightening. Imagine what life would be like, if one could escape to a virtual, more dramatic and more entertaining life. People will have Glyph over their ears and eyes at all times. In public transportation, workplaces, school recess, home, and everywhere else where they do not need to be using their eyes for any other function. People’s sole interaction will be with this

wearable technology further diminishing the, already decreasing, person-to-person social interaction. One of the most important educational resources is the surrounding reality. I believe that walking down a street fully attentive to the environment and paying attention to all the little details is a learning experience. Glyph, and similar wearable technologies, strip away this attention from reality, and redirect it to a virtual, non-realistic, introverted experience.

Second, Glyph can be viewed as a tailored eco-system. Wearables are commodities like most products that are designed by companies to meet people's needs or wants. Products must have a certain functionality that will create demand for them in the market, or else they will be produced at a loss. The CTO of Avegant, Allan Evans, expresses that Glyph's technology is a "requirement" for all consumers who watch movies (About the Technology, 2014). Accordingly, Avegant makes Glyph as functional and practical as possible to meet this greater purpose, and to satisfy a targeted customer base (i.e. movie watchers). For instance, Glyph can be hooked to anything that can essentially be plugged into a screen including smart-phones, DVD players, computers and others. Metz expresses her satisfaction with Glyph's adaptation to ones sight; she says: "I'm also surprised to learn that I can wear the Glyph without my glasses, since I can adjust the distance between each pupil and focus each eye individually. Once I do this, I have a big, crisp image in front of me. I'm floored to see the images in front of me quite clearly without my specs, which I normally wear for pretty much everything." These are among the main features Avegant advertises making Glyph a wanted product. Yet, with all this in mind, Glyph still contributes to breaking the social events related to watching movies, which changes the way this entertainment system is viewed. Movies started out in movie theaters as a social event where many people meet in the same room looking at the same screen. This ensures some level of communication between viewers. Then, it advanced to VCR and DVD's where people were able to mimic the theater experience at the comfort of their homes, which made it a more family-based event, yet still involving some level of socialization. Now, many

people watch movies on their laptop alone, but there is still a possibility to view it with others, and the existence of such possibility is important. Glyph strikes out this possibility, encouraging watching a movie or a TV show individually with no social interaction. This is one of the many examples of how wearables are transforming the forms of entertainment, as we know them.

Lastly, we can view Glyph as means of creating co-evolved possibilities, which applies directly to other wearable technologies. Simply, Glyph is capable of taking a major role in daily activities and altering the relationship users have with technological objects. Although in the technological world this is a very prestigious goal and respected accomplishment, it is still quite dangerous on society. In *Technology The Emergence of a Hazardous Concept*, Leo Marx argues that technology becomes hazardous when it becomes the driving force of society due to our complete dependence on machines. (Marx, 2010). It seems that wearables, including Glyph, are headed in that direction. Glyph is undoubtedly a fascinating technological product. The idea of a portable theater with spectacular resolution wherever you go is mind blowing. Unfortunately, people may be mind blown by the functionality and greatness of such technologies and simultaneously disregarding the potential consequences. If the means of interaction are transformed from people socializing with others to people socializing with their wearables, perhaps their Glyph headset, then they will be getting into the hazardous quicksand of technology as defined by Marx.

Metz's only complaint is that Glyph is slightly bulky and too heavy to wear for a long period of time, or when playing a racing game that requires some hand movement the headset would move. However, Glyph is still in its research and development process, so it is very likely it will be improved in terms of size and other physical features. Metz also expresses that her experience was very positive with Glyph and that she would be willing to watch an entire movie using it (Metz, 2014). This further proves that users are most likely to be fascinated with the technology behind Glyph overlooking its more complex social effects. Not

only will users be blindfolded when watching movies or playing games, thereby losing the social construct of group activities, but they will also be at danger of having their eyes blocked while in a public place. As it is nowadays, many incidents of violence take place because people have their ear-buds in and are not aware of their surrounding vicinity. One could only imagine that theft and physical violence are more feasible when people have their eyes blinded as well as their ears.

Taking a step back and looking at wearable technologies in the bigger picture, the market for wearables is growing rapidly. In *Tech Attire, More Beta Than Chic*, a New York Times article, Brian Chen states: “The wearables category is expected to be highly lucrative. Gartner, the research firm, estimates wearable computers... will be a \$10 billion market by 2016. The research company says that much of the revenue will come from accessories with health applications, like devices that count your steps or do things like automatically deliver insulin for diabetics.” (Chen, 2014). This incredibly large market will inevitably find its way to become a life routine. However, users must be mindful of the consequences behind the functionality. For instance, the automatic insulin delivery Chen mentions will save lives and improve health, whereas portable theaters will only encourage isolation and destruct social norms. Although this may seem like an exaggeration, yet if not addressed drastically, these repercussions could easily be overlooked and populations worldwide will be unmindfully using these devices.

Wearables are not only entering our life as entertainment products, but they have made their way through to assessing our lifestyles. In *The Body Craze Data*, Allisa Quart argues how wearable technologies quantify and measure many aspects of our lives like heart rate, sleeping patterns, distance walked and so on without us realizing the negative effect on our health. The utter convenience of such devices that require minimal input effort shadows the danger of being exposed to electronics almost every hour of every day. This can

be extended to all wearables whether they serve health or entertainment functions.

From an anthropological perspective, we must analyze all the consequences, positive and negative, these technologies have. However, as potential users, we must be fully aware of the extent in which wearables can affect us. Such technologies will most likely enter the market regardless our opinion, because the market is driven by technological advancement and generated demand. Yet, we, as individuals and as a collective entity, have the power to assess our need for these technologies. In most cases, we do not need wearables, we merely want to depend on their convenience or want their new added value features. Considering that users could be aware of this reality these wearables can eventually serve as convenient luxuries. Circling to Leo Marx, we can conclude that luxurious wearables are acceptable up until the turning point when people start viewing these technologies as the driving force of their society. At that point, we will fall into the one-dimensional virtual reality, failing to save the other dimensions that create a society; or rather, a community.

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