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Generic Case

Google Glass

Predicting philosophical and sociological effects on users and society

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Google Glass is an innovation that provides users with endless possibilities, but on the other hand raises many new privacy sensitive questions, for which the effects on society are yet unknown. However, these effects are relatively predictable, if one were to look at the latent structural constraints [1] that would evaporate with the use of this device (Wagner, 2013). Therefore, the concept of public privacy, valued by society, is being tested against individual human curiosity, valued by the user. For the exploration of the potential effects on society, in accordance with value sensitive design, it is attempted to define many different values from these stakeholders and based upon the values, gather assumptions about the philosophy of this new technology. This essay aims to address the likely impact of google glass on both society and users and the way explicit structural constraints [2] (countermeasures) could restore some of the status quo by increasing the costs of these constraints. Especially since sociology of technology learns us that design and society coevolve, the countermeasures are a reasonable part of creating responsible innovation and still maintain the status quo of contradicting values in society.

A high tech computer inside a small frame of someone's glasses. If you pay attention you can still see the exterior differences between these glasses and the normal ones. Still, this distinction is fading away as the design of AR glasses is gradually getting smaller and more discrete (Mann, 2005). This development is decreasing the costs for invading a stranger's privacy, without them noticing. At the same time, it gives the user an ultimate performance in providing information with minimal effort. These consequences are interfering with each other, since both carry values that are seemingly important, yet only fully achievable at the cost of each other. Values can be distinguished by intrinsic and instrumental values (Kudina, 2018). One intrinsic value coherent to the instrumental value 'privacy' would be 'trust'. As Roessler and Mokrosinska argue: privacy is essential for social interaction or meaningful relations, since privacy makes a relation require trust, which we value (Roessler & Mokrosinska, 2013). Therefore this value, among others, is in society's best interest.

On the other hand, this goes against our constant need for *effortless* information and memory. We value our memories and like to capture them in the best way possible. We also value satisfying our curiosity, effortlessness, independence or in terms of intrinsic values, safety, well-being and freedom. From the user's perspective, the costs constraining these values will be significantly lowered with google glass. In this case the glasses' design and appearance actually satisfies most of these values.
One negative effect from this need for capturing is that of mental presence. While both are real bodies, a user's here-body can be at a certain place, but he may experience that he is not there

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[1] Latent Structural Constraint: "..are constraints that are the natural result of the current state of the world" (Wagner, 2013). In this context, the natural result that something, in technological terms, is still not or nearly possible.
[2] Explicit Structural Constraint: "..are intentionally placed to raise the costs of certain behaviours and to sometimes prevent such behaviours entirely" (Wagner, 2013).

because his virtual body might be somewhere else (Ihde, 2002). For example, he is standing in the park but is looking at his virtual body in a captured memory or real time information application through the Google Glass. This is also describing his mental presence. Attention is not separable, therefore a user's mind (or body) can be somewhere else, while processing information from the glasses. It enables the user to process more information at the same time, but also constrains his mental presence in the real world. As a consequence, people in their surroundings can never be sure whether they have someone's undivided attention. Because the relation with technology is changing, the costs of dividing attention has gotten lowered and the latent constraint of having to pay full attention disappeared. One can simply record the moment and watch it some other time, even though reliving the memory is not nearly as good as actually being there.

Another issue concerning the need for capturing, is the question whether we really want to remember everything we capture. Rationally speaking it would be ideal to instantly obtain any objective memory, when our natural memory is failing (Mann, 2005). However, humans have need for both rational and emotional values. The user's subjective memories can no longer exist or will always be overruled by the objective ones. There will be scenario's where the user may not want this restriction, because their own subjective memory is simply experienced as better. Obviously, Google would have a delete feature somewhere in the functionality, but still that would force the user to at least search for the objective captured memory first, ultimately destroying the subjective one in the user's mind. Thus, with a completely objective second memory, Google glass' design creates user representations, which restrict the user's emotional values.

Another potential impact on society can be derived from the Mediation Theory. Because of the AR technology, the user can see real time information from the technology about the world, on top of the actual view of the world, resulting in a hermeneutic relation (Rosenberger & Verbeek, 2015). In this case our trust can shift from relying on real life information to digital information. The main problem is that this digital information is easier to manipulate. Trusting the screen more than the real world can have at least two consequences; communication and deception.

To begin with the first consequence, *communication* for the user can severely change if google glass were to be used on a large scale. With trustworthy screen information, the costs for collecting all the information needed is significantly lowered, resulting in less need for personal communication. The other way around, additionally to the design inscriptions implying less communication, bystanders can also enforce this development. Since most non-users are unaware of the functionalities of this new technology, their ignorance together with the fact that the use of these functionalities are not transparent for bystanders, might make them suspicious. Consequently, avoiding the technology might be the preferred counteraction, since they fear for an invasion of privacy. This choice can result in a communicative barrier between users and non-users.

The result may not only affect the way people communicate with each other. As for the second consequence of this hermeneutic relation, *deception* could occur when relying on false or manipulated information. From sociology's perspective design is socially shaped, but also shapes society (de la Bruhèze, 2018). Designers can inscribe all sorts of values, interests and scripts, some of which the user may not even be aware. Especially since Google is a company interested in profits, mostly generated with data collection, their designers are likely to fulfil the company's interests. For Google the costs for data collection will only decrease further, if one were to use their services all day long, which will be easier to achieve with glasses than cell phones. Therefore, the latent constraints on this issue will fade away.

Taking the Mediation Theory into consideration again (Rosenberger & Verbeek, 2015), Google Glass strives to achieve an hermeneutic relation that leans more and more towards a background relationship. In a certain way the users have to experience the world through the technology, without having to think too much about this technology. The contradiction here is that they want the benefits of technology, but not the technology with the limitations it brings. This refers directly to the technofantasies Ihde brings forward (Ihde, 2002). Unlike a cell phone, the users do not consciously ask for information any more, but most information is automatically pushed towards them. This sums up why effortlessness is a key value for Google. However, this value must be implemented with caution, considering the latent structural constraints that it takes away. Next to the constraints for Google's data collection, the constraints for creating a solely objective second memory, dividing one's attention and having quick access to all information, are fading away too. To keep some of the contradicting values, society will need to implement explicit structural constraints at the cost of effortlessness for this new technology. The example Wagner brings forward is that of facial recognition (Wagner, 2013). This feature can increase the costs of unlimited access to real time information, by having a built-in delay. This will avoid the chance that every stranger in the street can be recognised immediately, which adds to public privacy, but also has a slightly negative effect on the performance of the Glass.

Thus, from both the user's and society's point of view, some issues may arise. Google has a higher interest in effortlessness than public privacy (not to be confused with the individual privacy of their users). This decreases the costs for use ease purposes, which causes many latent constraints concerning society's values, to disappear. Users also experience the downsides, partly because users are also part of society, but also because they do not share the exact same values and interests as Google. However, design and society coevolve, in which case society can demand certain explicit structural constraints. These constraints will make the costs of the user purposes higher again and guarantee the status quo of society's values to, at least to some extent, keep existing.

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