SUBMISSION OF WRITTEN WORK

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This artefact is an exploration of your peers dictating your personal behavior. We are used to having the freedom to control our own actions and involvement in a social setting, but what happens when the people around you have the power to shut you off?

Mathias, Agnete, Mai H and Mai A
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Introduction

H.U.S.H. (Honest Universal Serenity Helmet) is an exploration of your peers dictating your personal behavior. We are so used to being in control of our own actions in social settings, but what happens when you give people around you the power to shut you out - in a very literal sense? (YouTube, ‘HUSH’, 2016)

H.U.S.H. is a helmet-type wearable technology. When you put it on, it will be centered around your head, and a front-cover will be open. But as soon as someone triggers the helmet, the front-visor will close, giving you a strong hint to “shut up” (see figure 1). It works by an Arduino controlling a stepper motor, that winds up a thread, making the visor close (see blueprint in Appendix 2).

The helmet is made to be triggered by using social media; in our case, we’re working with Twitter, and the helmet will close when a certain predefined hashtag is used. This was to explore the ‘online vs. offline’ interaction norms, where we are walking the line between what you can say to someone’s face, and what you are willing to say online. With this artifact, even though you are expressing your feelings online (via the hashtag), the effect is going to be very visible offline (the helmet closing).

H.U.S.H. is intended to be an amplification of the peers’ feelings towards the wearer. It does not force the wearer to react to these feelings; you can certainly still talk while the helmet is closed, and people will still be able to both hear and see you, but they will also know that you are actively ignoring somebody’s wish for you to stop talking.
This is part of what we believe makes H.U.S.H. interesting. There are layers upon layers of social constructs to be explored in the interaction between the wearer, and the people around the wearer of our artifact.

As a part of the development process, we participated in an exhibition. Here, we brought a prototype of H.U.S.H. with us, in order to show and test the functionality, as well as explore what kind of emotions and feelings it would invoke in the people wearing it. An important point for us was also to see if - and how - wearing the artifact would affect the interaction between the wearer and their peers.

**Material testing on H.U.S.H.**

To a great extent, H.U.S.H. is about social context and exploring how rules and norms affect our way of interacting with one another - especially in situations where the conversation turns sour. Along the societal reflections were the material explorations. In order to create an experience that allowed us to investigate the issues of online vs. offline behavior we had to create the right tool - the right artifact. In the making of this artifact we delved into material testing and explored a number of things.

*Exclusion - Less is more*

How much, or really how little, do you need to exclude someone from a conversation? Through material testing we explored how different fabrics impacted on the experience of being blocked out of a physical conversation. The obvious choice would have been a completely opaque material, but in testing we found that less, truly, is more. The first tests involved clear vinyl and opaque black plastic covering varying parts of the leaf-like pieces (see figure 2).

The vinyl resulted in a very industrial aesthetic, and the transparency of the material...
almost did not obstruct the vision of the wearer at all (see figure 3). We were striving for a minor obstruction of vision - enough that the wearer felt shut out, but subtle enough, that the wearer could still see their surroundings. Given that this wearable would be designed for contexts involving socializing we ruled out the industrial look. The vinyl also worked against our intended physical form, as it would not adapt to the soft curvature of the corset boning (Vallgårda, 2013, p. 2). Lastly, the transparency of the vinyl was too non-intrusive to the vision and thus made the interaction gestalt vague (Vallgårda, 2013, p. 2).

Covering the visor in opaque black plastic proved to be too intrusive and changed the interaction gestalt of the artifact completely (see figure 3). The unadulterated isolation created by the black plastic made the artifact become more like solitary confinement in compact form. The physical form became dark and aggressive - not only for the wearer but for the peers as well. The movement of the wearable itself – the visor being pulled up towards the wearer’s face became aggressive and reminiscent of a drawbridge, creating almost a fortress around the wearers face.

Our final design iteration brought white mesh to the table (see figure 1). We found that this was close to the minimum of fabric and transparency needed for the wearer to feel isolated, and for the

Figure 3: Three iterations on the leaf/visor-design
surrounding people to perceive them as such. Mesh, as a material was very different to work with compared to the plastic and vinyl from previous iterations. It had a natural softness and adapted to the curved structure of the corset boning. The transparent material and white corset boning used for the artifact resulted in a rather dainty and almost feminine aesthetic. We discussed several methods of fastening the mesh to the bottom of the boning. Ultimately we decided that pleating it would create a contrast between the delicate aesthetic and the rather harsh message conveyed by the artifact.

The mesh serves two purposes: blurring the face of the person wearing it, obscuring the facial features for onlookers, while still allowing the wearer to see the outside world, almost perfectly clear. So even though they are silenced, they can still follow the conversation and thus see what they are missing out on. The helmet is designed to be constantly visible in the wearer's peripheral vision. It serves as a constant reminder to “behave”, as the peers of the wearer might shut them up at any moment.

Wearables are what make the human body culturally visible (Lemoine-Luccioni's La Robe cited by Ryan, 2014, p. 1). With H.U.S.H. we have tried to create a wearable that reflects the offline/online culture and its issues while also allowing us to explore it. This was made possible since wearables, dress and fashion in general represent the social relations of the time and social contexts they are created in (Ryan, 2014, p1). H.U.S.H. embodies exclusion on demand, a real life take on blocking someone on social media, and thus comments on the cultural issue of how we interact offline vs. online. This makes H.U.S.H. a wearable that is a “performative act of embodied sociality” (Ryan, 2014, p3), more specifically the sociality happening when online culture starts to leak into the offline world.

The process and exploration

From dress to helmet
The progress towards H.U.S.H. began with the idea of a dress, which would help the user express their emotions through the wearable. Here we settled on the concept of cutting off the user from the rest of the world when they felt uncomfortable, by making the dress use an extra layer to fold up over the user's head. This seemed like the most efficient way of allowing the wearable to look like an ordinary piece of clothing, when it was not triggered by the user's desire to become isolated. In other words, you would not be able to spot the dress’ modification unless the user decided otherwise.

The dress was the first iteration of the physical form we had for the wearable, but it was later changed into a collar, and then a helmet. The first change from the dress to collar happened because we were more interested in
isolating the wearer from their environment, than the shape of the wearable. Making a collar would be less limiting of the wearer's movement and required less materials in general, but still had the same effect as the dress would. The new design brought up a new challenge; the collar itself required multiple motors to be able to lift the six individual leaf-like pieces, that would fold up around the wearer's head and isolate them (see figure 4). This would make the artifact too heavy and uncomfortable to wear, so it was turned into a helmet instead with a small opening in front. The opening would then be closed using only one leaf-like piece (the front-visor) and one motor as shown in figure 5.

During the next step of our project brainstorming, our group came up with the idea of letting other people control the wearable instead of the user doing it. Having wearables express or amplify the wearer's emotions seemed to be a common topic, as seen in the PHILIPS' “Bubelle Dress” (McRae et al, (2006) Philips Probe Dress. Retrieved from: http://www.lucymcrae.net/philips-design-probes), where the dress changes color based on the wearer's emotions. Thus we looked into the
possibility of allowing your peers to control the wearable, since it opened up a very different perspective.

As previously mentioned, this poses a question of what happens, when the peers dictates the wearers behavior. This made us think of two possible design paths for the wearables’ trigger – online and offline. A full changelog of the progress of our artifact can be seen in Appendix 1.

Online vs. offline

As we progressed through the project one thing became clear; we were splitting the artifact down two different paths, an online and an offline one. Both posed equally interesting questions and challenges about human behavior and the dictation of it by your peers.

The online version of the artifact poses an interesting comment on how we treat people online, and how quick we might be to shut someone off online as opposed to face-to-face. The ability to tweet at the helmet made the action of the peer much more subtle, and the wearer of the helmet might glance around a room, wondering who in there had grown sick of them. However this mode presents a larger option for misuse, and might water down the effect of the artifact. The closing of the helmet, if done too often, might lose its strong symbolic value.

The offline version is much more linear and, rather than changing the interaction, accentuates the signal one might send to get a person to shut up. The act of walking up to a person and pressing a button to shut them off is very strong, and thus might make the peer think twice about doing it. The experience of the wearer would also be very different, in that they then would know exactly who has grown sick of them.

The Exhibition

In the exhibition we wanted to accentuate the rather aggressive action of shutting people off with the helmet, and thus went with the offline version. Having people walk up and press the button was more obvious in an exhibition setting than tweeting at it, and since attendees put on the helmet themselves, we wanted to hear their experience when a person walked right up to them and shut them off. Though both modes have equal challenge and interest, the offline version rendered the result we had wanted; the users felt the action of being shut up as aggressive, and the experience of wearing the helmet quite claustrophobic.
An interesting point that we took note of, was a number of people looking at the helmet from the outside, without any prior knowledge and without having tried it on, actually thought it was meant to be something for the wearer to control. Meaning, that is was made for the wearer to shut other people out, instead of for other people to shut the wearer out.

Even though this was not the intended purpose of the artifact, this is indeed an option for the wearer. In the offline-version of the artifact, the button to activate the artifact is a bit hard-to-reach (on the wearers back), which should signify that it is not for use by the wearer; but it can be activated.

In the online-version, all the wearer would have to do, is tweet a certain hashtag. However, this hashtag is imagined to be
something along the lines of “#ShutUp”, meaning that the wearer is effectively telling themselves to "shut up", which can potentially feel very degrading - even if that isn’t the intention at all.

It isn’t unheard of, that artifacts are not being used as intended by the designers - it is actually rather common. This isn’t necessarily a bad thing, as it will start a task-artifact cycle (see figure xx), where the designers can see the audience using the artifact, which can inspire new directions for further development.

When people actually got to try on the helmet, the reaction we got was quite different. Many people commented on the claustrophobic feeling that it invoked. We found this to be an interesting point, as the mesh fabric itself would usually not be perceived as being able to create a strong barrier.

Still, the presence of the helmet, even when wearing it “open”, is still a lot stronger than we anticipated. This is something that we could definitely work on, as we do want people to be aware that they are wearing it at all times, but not in such an extreme way that they feel directly uncomfortable wearing it.

The strong presence of the helmet also hindered us in seeing how people changed their interactions, as - as far as we could tell - they were being very influenced by just wearing it open. Maybe if they had worn it for a longer period of time, in order to get more used to it, it would not have been so “harsh”.

Conclusion

As mentioned, the users did not wear the helmet for long enough at the exhibition that we could really detect a change in their behavior (YouTube, ‘HUSH’, 2016). It would be interesting to conduct an experiment with the users wearing the helmet for an extended period of time, to see if our theories on behavioral change would hold up. Another relevant experiment would be to test the online version of H.U.S.H. and comparing it to the offline version. The different mediums should provide different results and offer better opportunities for further development of the artifact.

In the making of H.U.S.H. we strived for a soft physical form to give contrast to the harsh message. The intention was to create a wearable that felt like an ever-present hint to behave and at the exhibition we found that we did obtain that goal, albeit the hint might have felt stronger than we intended. The wearers expressed feeling claustrophobic and that it felt as if the helmet was looming over their head. They definitely felt shut out when closing the visor, even with the barrier being so thin and delicate.

In conclusion, when your peers have the ability to dictate your personal behavior by using H.U.S.H., it changes the way you behave.
Literature

## Appendix I

### Changelog - Project: H.U.S.H. Helmet

<table>
<thead>
<tr>
<th>ID</th>
<th>Date</th>
<th>Description</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>1.0</td>
<td>4th Oct</td>
<td>The first idea was to make a “Get Laid Dress”, that could help people express their intentions and emotions better through their clothing. In this case, the dress would detect for example how you were dancing, and then slowly become shorter if you were dancing suggestively.</td>
<td>Project name: “Get Laid Dress”</td>
</tr>
<tr>
<td>1.1</td>
<td>4th Oct</td>
<td>Thinking about the opposite of inviting someone in, we designed “the Nope Dress”, where the skirt would be able to fold up over the wearers head, preventing any communication (or at least making it pretty hard).</td>
<td>Project name: “The NOPE Dress”</td>
</tr>
<tr>
<td>1.2</td>
<td>4th Oct</td>
<td>Working with how the dress would detect the “nope”-feeling from the wearer, for example by having sensors that could detect a headshake, a step back or a special hand gesture.</td>
<td>Working with detection</td>
</tr>
<tr>
<td>2.0</td>
<td>4th Oct</td>
<td>Working with the idea of the dress being triggered by other people instead; for example by people talking about a predetermined topic, such as politics.</td>
<td>Triggered by topic of conversation</td>
</tr>
<tr>
<td>2.1</td>
<td>4th Oct</td>
<td>Further exploring the “triggered by others”-idea, but letting it be more decided than just a topic; such as other people saying “shut up!” to the wearer.</td>
<td>Triggered forcefully by other people.</td>
</tr>
<tr>
<td>2.2</td>
<td>4th Oct</td>
<td>The dress could be triggered by social media, such as tweeting a special hashtag (#ShutUp).</td>
<td>Triggered by social media.</td>
</tr>
<tr>
<td>3.0</td>
<td>4th Oct</td>
<td>Dress was too large for our materials, motors etc., so we decided to go with a helmet instead.</td>
<td>Transitioning to helmet.</td>
</tr>
<tr>
<td>3.1</td>
<td>11th Oct</td>
<td>Movement-prototype; we made a cup with cardboard on top, using a pulley-system of strings to demonstrate the opening and closing movement of the helmet.</td>
<td>Prototype #1 (Movement)</td>
</tr>
<tr>
<td>3.2</td>
<td>11th Oct</td>
<td>1:1-scale prototype of one of the “leaves”, made with straws and opaque cloth, to test out how big it would have to be.</td>
<td>Prototype #1 (Material)</td>
</tr>
<tr>
<td>3.3</td>
<td>11th Oct</td>
<td>Made a functioning Java-code, that could trigger a system function (text output) whenever it detected a certain hashtag. (<a href="https://github.itu.dk/fsta/TweetGrabber">https://github.itu.dk/fsta/TweetGrabber</a>)</td>
<td>Java code functioning</td>
</tr>
<tr>
<td>3.4</td>
<td>18th Oct</td>
<td>Further material testing, using corset boning as “shaping” material for the leaves, testing how much stress it can take as well as how we could get the shape we wanted, making 1:1 leaves.</td>
<td>Material testing</td>
</tr>
<tr>
<td>3.5</td>
<td>18th Oct</td>
<td>Shape testing, using our test-leaf from 3.4. Currently, we</td>
<td>Shape testing</td>
</tr>
<tr>
<td>(1) Oct</td>
<td>were working with shaping it as a “flower”, opening and closing, but could also be designed as a visor/bonnet, “sliding” open and closed. Continuing with the flower-idea, as that can also be worn not as a helmet, but more of a poncho/clothing item.</td>
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<tr>
<td>3.6 (3) 18th Oct</td>
<td>Shape testing, where we played around with having some of the leaves always “closed”/up (the “back” ones), kind of like a crown. Icequeen inspired, commentary on the monarchy?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.7 (1, 2, 3) 18th Oct</td>
<td>Material testing using different materials for the leaf itself, comparing how it felt different using stretchy/non-stretchy materials, or opaque vs. see-through materials.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8 25th Oct</td>
<td>Testing different methods for using the string to distribute the pull and weight on the motor, using straws and different attachment methods to the leaves.</td>
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Appendix 2
Blueprint of the artifact “H.U.S.H.”