

Mask On/Off

When we can disguise ourselves and choose a new personality, who do we become?



Final Product

Three interactive masks built using Arduino nano microcontrollers and biofeedback sensors to each represent an individual character

Commissioned By:

Minerva Art Academy, Groningen

Project Duration:

March 2018 - June 2018

Topics Explored:

Interaction design for Art installations,

Teammates:

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Project Role:

Sensor system design, Electronics

How We Present Ourselves Online

What Do You Show, What Do You Hide?

In our current society, social media allows us to pick and choose which aspects of ourselves to showcase to the world, and which to keep hidden. With Mask On/Off, we created interactive masks using bio-feedback sensors and micro controllers, and sought to explore how people's behavior might change when the ability to mask their identity and interact with others was presented to them in the real world.

My team and I were fascinated by how great an impact social media has on people's mental health. While social media platforms allow us to connect with friends and family and keep in touch with each other from anywhere in the world, we also tend to share only the very best parts of our lives online. Facebook and Instagram are covered with posts of fancy meals, vacations, and happy life events. Meanwhile, looking at these posts of others often makes us feel unhappy about our own lives, as it seems like everyone else has it better than us.

The Characters of Social Media



As the negative effects of social media stem from our collective desire to tailor the image of ourselves that we present to the world and handpick which features we are most proud of, my team and I started looking into online social media trends and investigating the different qualities people were most likely to highlight about themselves. After doing this, we came up with three characters that can frequently be found on social media, the athlete, the vocalist, and the extravagant.

Our athlete character was based around people's desires to appear fit, healthy, and attractive; the overall desire to showcase one's body and its strengths. The vocalist character, based around performers and those who use social media to make their voice be heard. Lastly, the extravagant character was based on the use of social media to show off, be it an expensive meal, a trip halfway across the world, or simply our daily routine. In essence, the extravagant character desires to be noticed and admired by others around us.

Building prototypes and testing interactions

Prototyping with Bio-feedback sensors

We then set to turning these characters into physical masks that people could don in the real world. We created the masks by vacuum forming plastic around a basic mold, and customized each one to embody its respective characteristics with bio-feedback sensors and LED lights. For the athlete, we attached a pulse sensor and programmed the LED lights to blink in sync with the user's heartbeat. To represent the vocalist's desire to be heard, we used a small microphone and used the incoming sensor information to turn on more lights the louder the user spoke.



The vocalist, the extravagant, and the athlete masks

Encouraging Interactions

For the extravagant character mask, we used vibration and tilt sensors to detect the user's movement and represent it in the lighting pattern on the front of the mask. After building the masks, we exhibited them at the University Museum Groningen, where we set up the masks and mirrors in a small room, and invited participants to try on a mask, view their reflection, and interact with others. During our exhibition time, we watched as visitors tried on the different masks, and became bolder, played with the sensors to see the different reactions, prodded stuck up on other people, and, of course, took selfies.

Our Main Finding: Anonymity changes people's demeanour, whether online or in person with a mask, the ability to conceal parts of our identity makes us bolder