

Mélanie Abbet

ID: 40150271

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Github: <https://github.com/melanieabbet/CART360>

Think of a context and an environment where you would like to intervene. Where will you present your project? Who is it made for?

The way in which an individual perceives his environment is, I am convinced, personal to each of us and can vary according to the day. For example, a grey and rainy day can bring back a feeling of comfort and nostalgia or, unlike depression and sadness. For this project I want to take an interest in our perceptions and take into account something that forms this environment. Ideally, also reflect on how we perceive this thing or part of the environment.

So I decided for this project to think with what can be transmitted through our senses, that is, sight, smell, taste, hearing and touch. After reflection and for practical reasons I rejected both senses: smell and taste in favour of focusing on one or more of the other three.

For me, sight is one of the senses that I find extremely important, as well as hearing, touch is a wonderful way to explore and lends itself well to various types of interactions.

As a sighted person and without any particular visual disturbance I perceive colours without any problem and I can understand my environment in a certain way. (Although I have always wondered if everyone perceives colours in the same way outside of colour-blind and visually impaired people, the same with sounds). On the contrary, people with vision problems have little or no opportunity to differentiate colours. For this project I will therefore think about a different way of «seeing» or apprehending colours. The persons concerned should be the visually impaired or any individual willing to try a different experience. The project should be mobile but designed for indoor use.

Think about the kind of relationship you wish to foster between your users and the artifact or installation. How can you use your project to destabilize the users and make them react on themselves, their environment and society?

I am not yet sure of the final direction my project will take, the technologies, existing sensors that will be

available to me and what will be achievable in the time available. However I am quite certain that I want to make sure that the user faces part of a unique experience that links color images and sounds. I want it to be experimental and to encourage people to think about what we see, how we perceive it. I am also thinking of making something that is not normally perceivable into something tangible in this case, for example by linking colour and sound. The idea is to associate specific colors to specific colors from its specific. Depending on the participant's involvement, he can imagine himself and get a more tangible insight into what it could be like not only to see his surroundings but also to hear them in the way of Neil Harbisson, the first cyborg who can «listen» to colours thanks to an implant. What I find fascinating and which inspired me to a great extent when it came to the direction and subject I wanted to take.

As for the user, I don't expect any particular reactions from the people testing my final prototype but more from a feeling of pleasure due to the fact of exploring something known in a different way. In the case of people with poor vision or who do not perceive colours, the result would probably be different, revealing something previously unavailable to them.

Think about the notion of empowerment. Is your artifact really helping or challenging its users in any way or is it just another psychological prosthesis?

Ideally with this project I will question the perception we have of the world. The user will be challenged to perceive and interpret something unknown in a completely unusual way. In this way I think that the appearance of a certain questioning of the idea of oneself, the way in which the perception of things is influenced by an individual is possible.

As for the blind person, many means are used to enable them to perceive shapes or writings, more particularly by touch, for example a 3-dimensional version of the Mona Lisa exists, but no technique is widely distributed to enable them to grasp colours. Patricia Bérubé is interested in colour and their perception by

touch, but the association between colour and sound is not very widespread. Yet this association has existed for a long time, Kandinsky (1866 - 1944) for example described being able to associate colours with sound: From the spiritual in art, Kandinsky, «Colours are the keys of a keyboard, eyes are the hammers, and the soul is the piano itself, with many strings, which enter into vibration», «The warm light red (Saturn) sounds like a brass band where the strong, obstinate, unwelcome sound of the trumpet prevails. » This phenomenon would even be something known as synopsy «Larousse.fr : Form of synesthesia, during which the perception of a sound produced in the subject of phenomena of coloured vision. «With this project I would therefore give an insight into what it would be like to perceive the immediate world in this particular way.

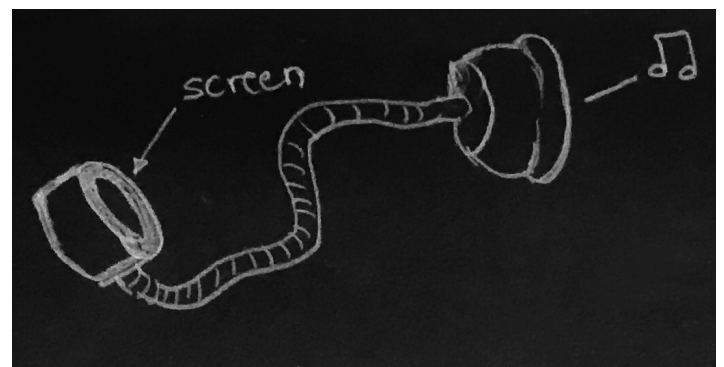
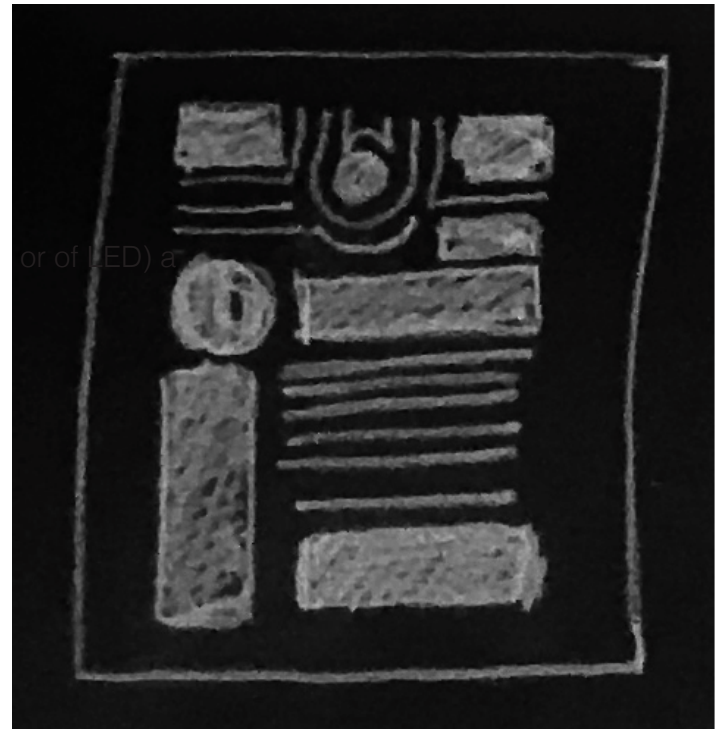
Think about something meaningful. What are you trying to tell us with your project?

I think I want to convey in a more or less critical way that there is a lot of mystery in this world and that there is not a single way is the right way to perceive and interpret the world. On the contrary, the world is made up of a multitude of different facets. What can be perceived from these facets is ultimately only a very small part of it. That it is necessary to open up to new experiences, reflect on oneself and leave one's zone of trust to get a different insight into things than the usual way of perceiving them. I question the human senses and their reliability, what is perceived from reality and what is reality as well as what is considered as evidence. What personality in addition to our physical capacity or personal feelings has to do with our perception. I want people to move away from their usual way of perceiving to put themselves in a certain way in the place of another person with different capacities of perception from their own. It is supposed to be an experience that makes each user think about what they have just tested, about the impact it could have and that it generates a reflection on what they have felt and what it means. I don't want to fundamentally change things or people, but I hope to succeed in posing a critical challenge that has some effect on them and makes it possible to question them.

Storyboard:

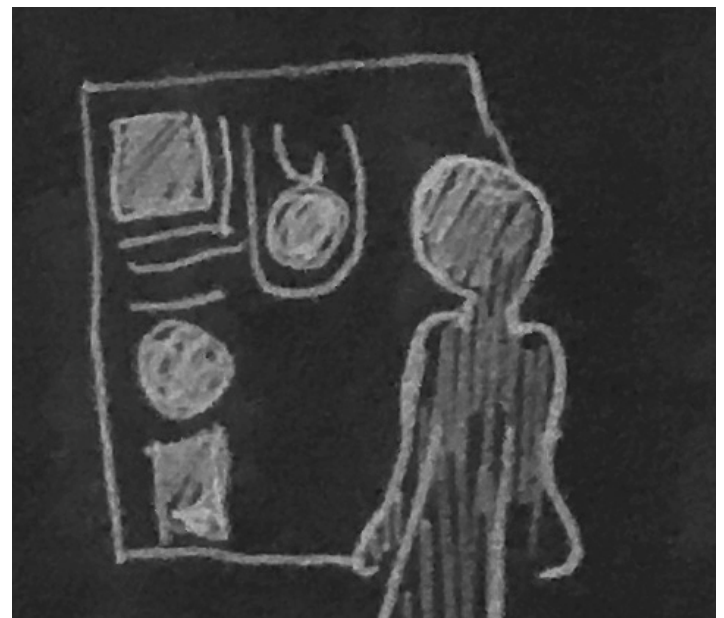
The project is composed of one black and white poster and one «two side» Object with a kind of screen

output which can displays colors (could be made of a screen or of LED) and one sound output.



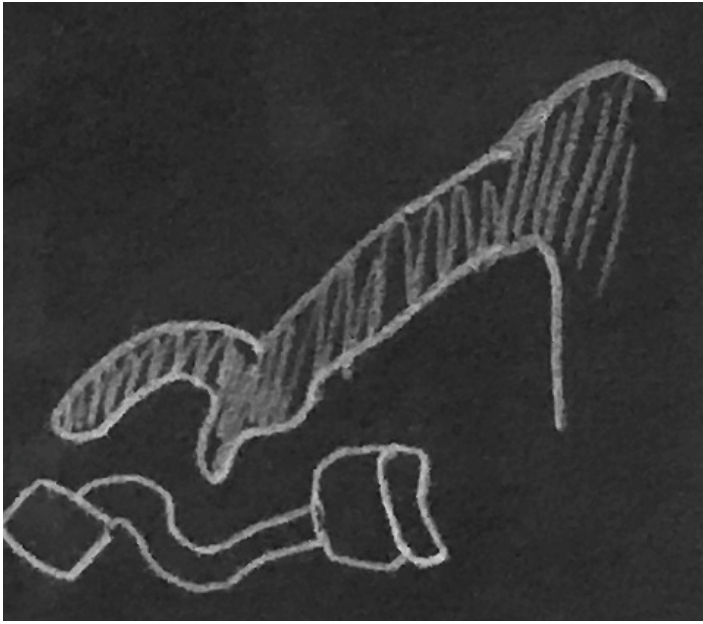
1)

The user see just a black and white image



2)

He took the object



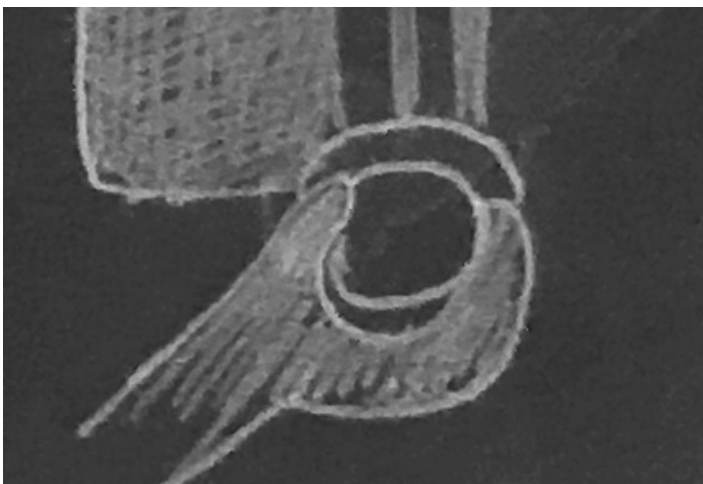
3)

hold the side with the headphone on his ear



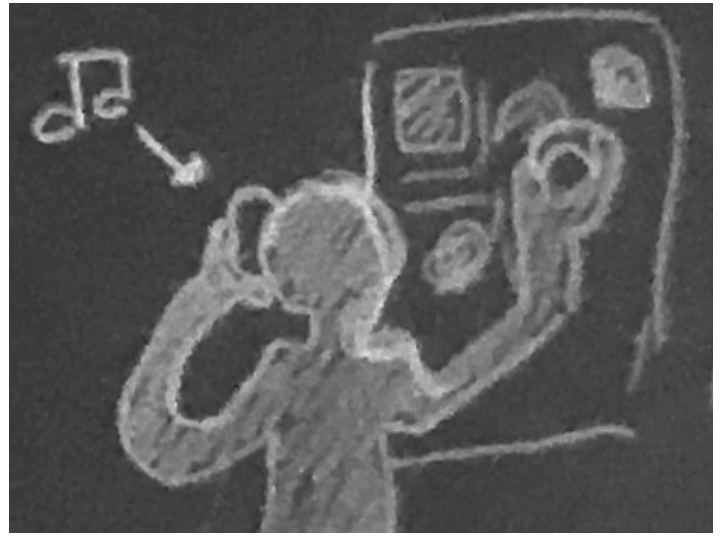
4)

He put the other side on the picture



5)

The object detect the different parts of the image and give different sound feedback which should represent colors



6)

The visual feedback starts first by displaying white light



7)

Once the user starts to recognize similar sound, the visual feedback starts displaying colors for each sound



8)

The way the user move through the picture influence the visual and the sound creating an unique experience.



Similar project

Neil Harbisson

Neil Harbisson is a young man in his thirties. He is a cyborg and even if we cannot consider him as a project, the antenna he has chosen to implement on his head and which can detect colors corresponds to the kind of experience I want to create with my project.

Mr. Harbisson suffers from severe color blindness, achromatopsy. In short, he only sees in black and white. In 2004, however, he had a device implemented that allowed him to interpret colours in a different way. Its antenna is actually a camera containing a device capable of capturing the frequencies of colours and converting them from which it can transmit them as sound waves to its brain. The process he followed made Neil Harbisson the first cyborg on earth. He describes this passage in cyborg as a kind of learning, he had to memorize which colors corresponded to which tonality before it became «perception».

«At first, I had to memorize the names of each color and the notes but after a while all this information became perception and I didn't have to think about the notes anymore, and after a while it became a feeling. I started to have my favorite colors and dream in colors» Neil Harbisson at The Daily Mail (traduce from French). He is apparently even able to hear colours whose wavelengths are not accessible to the naked

eye and to have images sent to him by wifi or blue-tooth in order to hear them without seeing them. He considers his implemented device as a way to «broaden his senses».

https://www.maxisciences.com/couleur/neil-harbisson-l-homme-cyborg-qui-entend-les-couleurs_art32187.html

The sound of taste

The sound of taste is a collaborative project between Novalia (an agency specialising in conductive ink printing) and Grey London for the Schwartz brand, which is a brand selling spices and herbs.

The goal is to make people experience the sound of spices. For this purpose Billie Jean an illustrator created a poster on the theme of taste with different color representing the 16 different spices on the board. Each colour representing each spice was then linked to a different musical tonality. All this is printed in conductive ink, which makes the poster tactile. An application was created to hear and be able to create by interacting (touching, touching the surface) with the poster to create different melodies. I also like the fact that the agency in this project gives an extra dimension to something in this case spices, something that cannot normally be experienced or perceived in a natural way as Andy Lockley the Creative Director at Grey London says *«We thought this would be a great way to dramatise flavour, something that is silent and invisible»*.

This project confirms one thing to me: sound can be an effective means of communication in different fields. As for paper, I find it extremely interesting to be able to transform it into a kind of control tool. It becomes in a way a kind of musical instrument once connected to the application.

<http://www.novalia.co.uk/portfolio/schwartz/>

Patricia Bérubé

Patricia Bérubé is a former student at the Université de Montréal, currently a Research Assistant and completing her PhD at Carleton University. She has a master's degree in art history and a specialization in animation. During her master's degree in 2017, she focused her research on helping the visually impaired or blind in

the field of art history. Apparently passionate about art history, she was interested in how people with vision impairments could still approach works of art. Like me, she looked more closely at the idea of making them experiment with colours. However, it focused on tactile perception. The goal is to transmit these colours by touch. She chose a work as a prototype and then decided to create a different shape that could be associated with different colours and easily identifiable such as circles for red or triangles for blue. All this in order not to make the user too complicated as he cannot inbornly retain a huge palette of shapes. Finally, a point that I find important is that it adapts the size of the table so that the user can easily grasp its entire surface. I find these researches innovative and the result must be very satisfying for the painting she has chosen, however it must be more delicate to represent several nuances in a tactile way while through the sound as described by Neil Harbisson it is possible to create a wide range of variation, especially by taking into account the volume. However, she makes one observation that I find interesting: *«Participants tend to associate each colour with the emotional charge that is traditionally associated with it in our North American culture.»* (Traduce from french).

<https://nouvelles.umontreal.ca/article/2018/05/11/une-etudiante-permet-a-des-non-voyants-de-voir-des-tableaux/>

Write a paragraph on how/why your project will be different and impactful in comparison to the projects you researched.

My project is not really the same as the example mentioned above I see it more as a combination of different aspects of these projects. My goal is for sighted people to be able to put themselves in the shoes of blind or partially sighted people. My poster is therefore initially in black and white. Finally, so that people can put colours on these sounds other than just with their names, I reveal them after a while, but by abandoning the information I try to make the experience more interesting and I try to create a kind of reflection. My goal is finally that the person cannot see and hear the color at the same time so that he or she can completely immerse himself or herself in the world of the visually impaired and get closer to the experience

that they themselves could have in testing the project. It is the strength of my project that I think this feeling of empathy and allowing people to think about how others may perceive things. Finally, apart from touch, I am interested in sound because, as I said earlier, unlike touch, it is possible in my opinion to go into much more detail in the interpretation of colours. As with the second project, I want to present something invisible and visible by giving it an extra dimension. Because if my project is designed for the sighted person it also allows the person with vision problems to experience in a certain way what it is like to perceive colours, in this sense I approach Patricia Bérubé's project.