XD prototype: this version presents many of the tested elements discussed below.

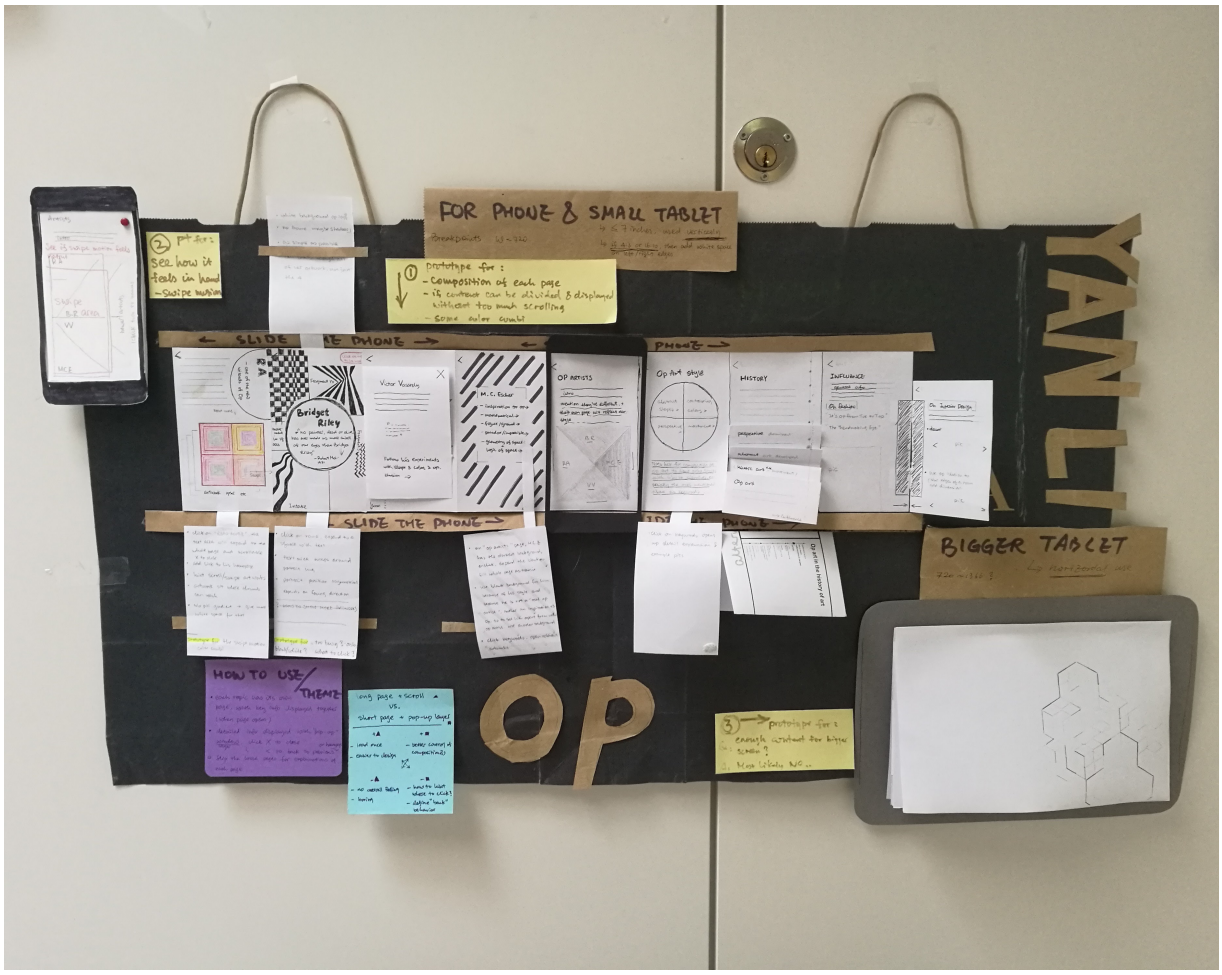
Paper prototype(s) & sketches

I made 3 prototypes and tests for 5 designs / functions:

1. one phone on the top-left corner: User can take it off and try in the hand to see if their thumbs can reach the swipe area I planed and see if the swiping motion through the pictures on that page feels comfortable and natural.
2. in the middle of the picture, prototype for mobile version of the site: here is about individual page design to see if the content I've prepared so far can be divided into two parts: core info and detail add-on. The core info needs to fit in one page (I'am working on the version with minimal scroll, so no long pages and the goal is to create short page to give a glance of scale-downed but most important information about the topic on each page). The detail add-on will only be shown when the use choose to see more and will be displayed as a overlay on the existing page.

   This prototype and sketches serve also the purpose to design the layout of each page using the design principles. As the mobile page is rather small, I picked one big element for each page and position the other elements in different ways with the goal to achieve a balanced layout. Image will take up the majority of the page, while text is minimal on most pages.

   On two of the pages I prototyped the use of colour as well, only roughly.
3. a tablet prototype to plan the layout of the pages on a bigger and horizontal screen. Since a bigger real-estate on the screen generally needs more content to display, not simply enlarge all the element from the mobile website, I wanted to see as well, whether I have enough content to build a laptop version of the website.



User tests & results (mobile site):

As I tried, on purpose, different layouts and different ways to present elements on my website in each assignment, I had a collection of many alternatives for the users to test today, both from usability point of view and individual element design and perception.

I tested 3 female KEA students and 2 female classmates face to face, asked 4 random people online via Adobe link / screenshots (1 male Computer Science master, 1 male coder, 1 female Chemistry master and 1 female Engineer). I've also tested some elements with my husband (molecular-biology PostDoc). Age range from 18 to 36.

Homepage

As noted in all my assignments so far, homepage design for a website about Op art style gives me quite a lot of headache. I tested 4 versions this time (the 1st one with 2 variations in text) to see if the homepage can attract users' attention and it it's suitable for a website for an art style:

1. simple, only logo and text

This is the simplest version of the homepage. I started with the more complicated ones since the first assignment, and as I'm not satisfied with any of them, I tried this simple one out of desperation.

About the 2 variations: I use the word "tagged" as a pun, but later removed it because it suits probably better the "about site" page as the whole idea of this site and/for when I explain the logo design.

Results: with this simple design, most user didn't immediately realise this is a site about an art style. One said there's no artistic feeling on this page and even looking at the words "op art" didn't ring a bell. "Op art" seems to be just a random collection of words, maybe a typo. Two said it's probably about Op art, but not sure what Op art is. Two user said that they likes the minimalistic style, but still wouldn't connect this page to a website about art, it's not specific enough. Only one commented on the logo and got the relationship between en eye and the art style immediately.

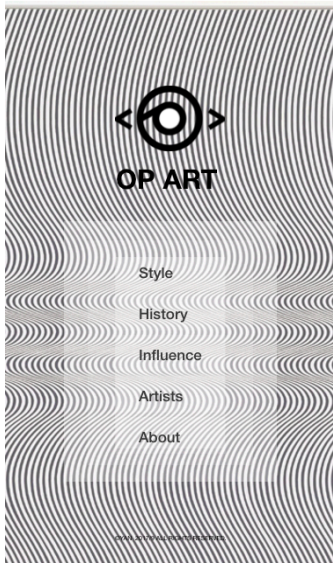
After I explained that it's a website for a art style called Op art, two users suggested adding some image on this page.

Thoughts: The acceptance of this kind of webpage seems largely depend on one's own style preference, i.e. you like this page simply because you like "minimalism", not because it's a suitable page for the site. The topic of the site, namely Op art, is not obvious on this page with this design.

2. logo and text, with Op artwork background

About adding background image: it does make sense to say that a website about an art style should present the style and give visual impression early on, i.e. on homepage. I had, however, a hard time picking one image to use on homepage, because no one piece seem to be able to represent this style. I've tried other images but picked this one now because it's the background image of MoMA's exhibition about Op art and this exhibition is considered to be one of the

biggest moments for this style, so even though it's from one particular artist, it's still "fair" to use it to represent others, at least MoMa has used it this way…



Results: mostly negative feedback, most user would like to close the page immediately, saying the page is causing discomfort in the eye, or wonder if there's something wrong with the screen. One guessed it's probably a site for art research and another user felt it's a site for a small group of people with a specific interest, they wouldn't stay longer because it's not relevant for them.

After I explained that optical illusion / movement is one of the key elements of this style, some said they understood now but would like to see another image. After seeing some other op artworks I provided, they said probably nothing would work.

Thoughts: On the one hand, user / viewers felt the dizziness, so at least they got a little bit of the essentials of Op art just by looking at the homepage, so the homepage is on topic now, compared to the plain and simple one under pt.1. On the other hand, it's obvious that this kind of image is not suitable for homepage, if most user wouldn't even stay and read further, unless I can accept the fact that my site is only for a limited number of people, not for everybody to get to know Op art.

3. use the original MoMa image as background for homepage

About: in the first version of my homepage design, I used this image as homepage background, and add navigation links in matching style of these colourful texts. Because some users expressed that the two designs under pt.1 and 2 were too plain, I asked their opinion on the use of this original image from MoMa exhibition and adding colour in this way.

Results: One said the MoMa image doesn't look well designed at all. Most said that it's not looking better, and they got even more dizzy now with the colours. One knows about this exhibition and she likes this image very much.

Thoughts: I agreed that there's too much colour, for the style, and that's why I abandoned this design in the first place. User feedback indicates that even though they said they wanted to see colours on homepage, what bugged them the most might still be the background itself. Simply adding some colour might not solve the problem that Op artwork is "too much" for on homepage.

4. Animated version

About animation: from the very beginning I've wanted to use the Op art style on the homepage and since the actual artworks are difficult to work with and/or not accepted by most viewers, I tried something else, namely this animated movement of dots and lines, which could represent some of Op art's elements. It's triggered by mouse hover, so it only works on computer now.

Results: almost everyone thought it's fun and cool and kept playing with it and click around without any hesitation. After I explained that Op art could achieve similar effect with only simple shapes and lines, on a normal canvas, they were surprised and seemed to show more interests about this art style.

Thoughts: It surprised me that this version didn't cause the same amount, if not more, of discomfort for the user / viewers. I did make a "busier and crazier" version of the animation but decided to settle with this one, which was probably a good call. Not sure if people's interests /acceptance is on the animation or on Op art or the site itself though, so still not sure whether I should use this as the final homepage.

Final thoughts on homepage design:

Maybe it's not enough to be classified as a catastrophic error but the homepage design still posts a serious / critical problem for my work and I need to solve this quickly and as "correctly" as possible. Some possible solutions that I've come up with are:

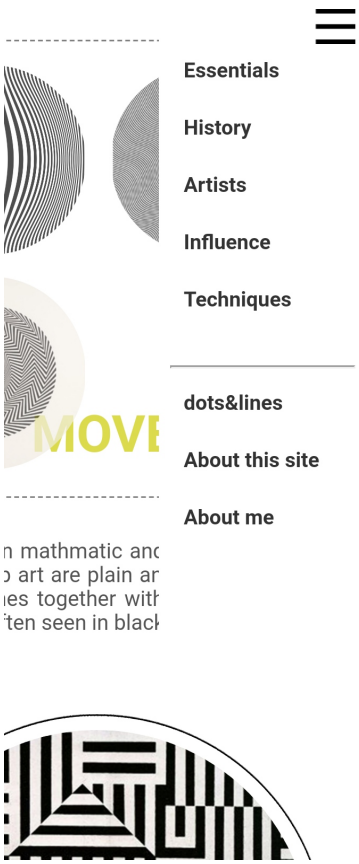
1. gather more op artworks and place them as smaller tiles together to form background. In this way there is visual / image on the homepage to attract attention and it's not too much movement going on, compared to one single and big image, that could disturb the user.
    1.1. potential issues: whether or not to include colourful artwork and if so how much to include? Coloured elements can attract more attention then text in black on white, even bigger and bold texts, so the link buttons could be overpowered by colourful images and become therefore harder to function as link buttons.
2. instead of actual Op artworks, draw some small images myself resenting some of Op art's key elements and put them together as tile and form a the background. Keep the tiles simple so not as much discomfort as some real Op artworks. Could be s static version of the animated homepage under pt. 4, since this was accepted the most by users.
3. Do not hint what this site is about through image or animation, rather tell the user directly using clear text, such as "learn more about Op art, the style that trick your eyes" etc.
    3.1. most functional but could be too descriptive, especially considering the fact that it's a website about art.

Scrolling long page vs. short page with more click

This is one of the first things I considered when I started working on the individual pages. In the HTML and CSS assignment I wrote long pages, ie. all subjects about the art style are discussed in a really long page under different headings. In order to give a quick look of what's on this page and to avoid too much scroll up and down, I added a corner navigation with section tags so that user can jump to the sections they are interested in.

In the assignment with paper prototype and XD, I made mostly short pages to minimise the need for scrolling. I tried both style because I'd like to know other people's habit and preference regarding long pages that need a lot of scrolling vs. short pages that provide quick overview within one screen but need more click to get the detailed info, so I tested relevant pages as well and/or asked the users and other people which style do they prefer.

Results:



One said it's a good question and after thinking a bit she said long pages that need lots of scrolling is annoying. One said scrolling up and down is what you do when you browse a webpage using a phone, so she's not against it, rather accept the reality, and if the page gets too long, she would just ignore texts, quickly scroll down and look for pictures only. One immediately said she dislikes pages with a lot of scrolling, except for the stuff that she really wants to read.

Almost everyone got surprised when they clicked on the menu button and saw the possibility to quick jump to different sections on the current page. No one clicked the menu button with the intension to find quick jump, they clicked here because they wanted to go to other pages or they just trying every button without any expectation. After discovering such function they agreed that it is useful.

No one seemed to pay attention to the the function that such navigation also provides an overview of the current page's content as well. When asked, they said that they've never thought about getting an overview of current page and they are used to start scrolling and find out what's on the page while scrolling. Whether or not a shorter page with page content overview in itself is a better solution, seemed to be a question that no one had thought about before.

Thoughts:

A navigation function which provides the possibility to jump to different sections on a long page is probably a big improvement in UX design. Not all user know such function exists though, because a menu/navigation button usually just functions as navigation to other pages and not to the content on the current page. A possible reason for this is that user associate menu button with certain functions and therefor not expect more out of it. A possible solution for this could be giving such button a clearer indication that it's for "quick jump within the current page".

The navigation button with quick jumps can in theory prove a overview of the content on that page, but if the user doesn't know a button provide quick jump to different sections on current page, they won't get the overview, because they wouldn't even consider click here. They click on navigation button only when they want to go to other pages on the site.

Assuming the user knows about the quick jump navigation and therefor can read the page without the annoying scrolling and can get overview of content of current page, there is still a cosmetic problem with the "long webpage" design, namely the first impression of this page. On such long pages, the top portion of the page which will be sit inside the viewport when user opens up a page, usually consists of a top navigation area, header / banner image, heading in big font size, some text and half of an image, if any. This could be seen as normal (users today are used to see this kind of page and are already ready to scroll down right after the page loads), but could also be seen as bad first impression (probably depends on the subject matter of the site and its user group).

Shorter page, on the contrary, does give a immediate overview of page content / overall feeling of the page and usually has a well balanced layout. Potential issues with this design is that it requires more clicks, both for going to the target content (compared to just scrolling) and for going from that extended info back to the short overview page. When the site structure gets more complicated, such an extra level in the structure could cause more confusion, which I will discuss below.

Different Navigation: whereto and button design

As there is need for two kinds of navigation, one for quick jump within current page and the other for navigate to other pages within site, how to present these functions and what kind of button to

use become the next topic. The most common solution for navigation on a website is the “menu bar style”, with basic structure buttons displayed in a horizontal line on top of the page and vertical buttons for “sub-menus” under each basic button when it’s selected. There could be more levels of “sub-menus” and grouped following Gestalt principle.

The potential issue with this solution is mainly on the mobile website. When there are more basic buttons and each one needs to be big enough for clicking, the buttons / navigation area alone can take up a big area on the screen. In the assignment we need only 4 basic navigation buttons to fulfil the minimum requirement, but even with this small amount, a navigation area still can get too big (more than two on one line could already makes it difficult to click on). If the navigation area is not fixed on viewport, but stays only on top of a long webpage, this means user has to scroll to page top first and then use the navigation, which could be inconvenient. When the buttons are fixed on top of the screen for easy access, the real-estate issue becomes more obvious because this huge navigation block is fixed and therefor is always there taking up the valuable space. If developer designs to “automatic hide and show” this area, for example triggered the “show” when user scrolls up (so user doesn’t need to scroll all the way to the top for accessing the navigation), it might cause unpleasant experience as well, because showing and hiding such big area could be perceived as flashing on the screen.

The tests I did within this topic are three-fold:

In order to solve the real-estate issue, I tried to fixed a smaller button on one corner of the screen and clicking on it will reveal the navigation area as an overlay (as shown in the image in previous page).

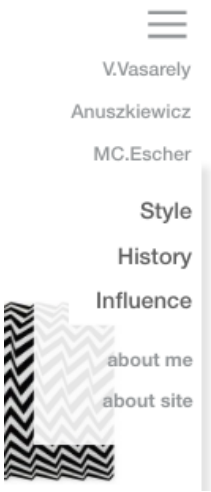
Because there are different kind of destination, I tried two approaches: the first approach is using separated buttons for each kind and the second approach is using only one button but use different font colours or sizes or other visual element to hint difference in hierarchy.

For navigation button I tried two version as well: one is the most common one, namely the three lines stacked on top of each other which is what people often see on mobile websites and apps and the second is my logo and I wanted to test if the user could realise that this is also a button and whether or not the user could associate the logo with homepage where there’s a huge logo displayed.

vs.

Results:

1. regarding smaller navigation button that sits on one of the corners the whole time: all users thought it’s a nice feature, both functional and nice looking, and they liked the way it expand into an overlay on the current page with text/buttons inside it. They all knew that they could click on the text/buttons on the overlay and expected the target page be loaded.
2. regarding the two kind of destinations: most users associated menu / navigation button only with links to other pages/topics on the site and got surprised when they clicked on the menu button and saw the possibility to quick jump to different sections on the current page. Most user didn’t get the reason behind the differentiation in font colours (see right), sizes, or other grouping, only one thought about the difference and concluded that it must be because of difference in the level of the destination, like a difference between menu and submenu.
3. regarding display two navigation buttons at the same, one on top-left corner and one on top-right corner, different in design, each for one kind of navigation (see above): all user knew that the three lines are menu button and clicked on it without hesitation. About half users clicked on the logo button as well but didn’t have a specific expectation regarding which page it might lead them to, while the other half of the users didn’t think the logo’s clickable. Only one user knew the logo button would lead to homepage where there’s a huge logo displayed.



4. When the logo button's replaced by <, all the users knew immediately that it's clickable and considered it as a back button (more on back button behaviour and expectations later).
5. other notes: One wanted the navigation button to be even bigger. One wanted the navigation overlay to include the whole sitemap for a better overview of the whole site.

Thoughts:

I. regarding smaller navigation button: for the mobile version of the site, this could be the final choice for navigation, instead of a menubar.

II. regarding on-page navigation and local navigation: if the navigation area would contain the whole structure of the site, including section tags on individual pages, users would probably be less confused. Such detailed navigation takes a large space though, even longer and/or wider than the screen, so might need to make the navigation area scrollable.

III. regarding button design: the common menu button is more recognisable for sure and with its presence, user would probably not notice other navigation possibilities. Simply putting two small element with similar style on symmetrical position on the page is not enough for users to realise that if one is a button then the other one should also be clickable. It is not to say that user can only see one button for navigation on one page. When the second button is well recognisable as well, ie the back button, users don't have problem to use them both. So if in the final design that two buttons need to be used, it's better to use two design with equal acceptance, and preferably both are well recognised. Using logo as button is probably not a good idea.

Back button Behaviour

I was thinking about whether or not should I provide a back button on the webpage. On the on hand all browsers provide this function already, an extra back button is likely unnecessary and if it behaves differently than the browsers default setting it could cause confusion. On the other hand, for people that uses full screen mode with hidden buttons on the phone and don't have gestures setup, a dedicated back button provided by a website could be helpful.

Assuming that a back button is needed, the next question would be where should be the back button lead the users to? Should it simply direct back to the previous page user just visited, the same as the browsers do? Or should it behave like in a folder structure that you go back /up on level? On a site where the structure is simple, there is probably no need for the "go back/up a level" function, but as the structure gets more complicated and more levels are present, will the user visit the site like they browse through file system with folder levels?

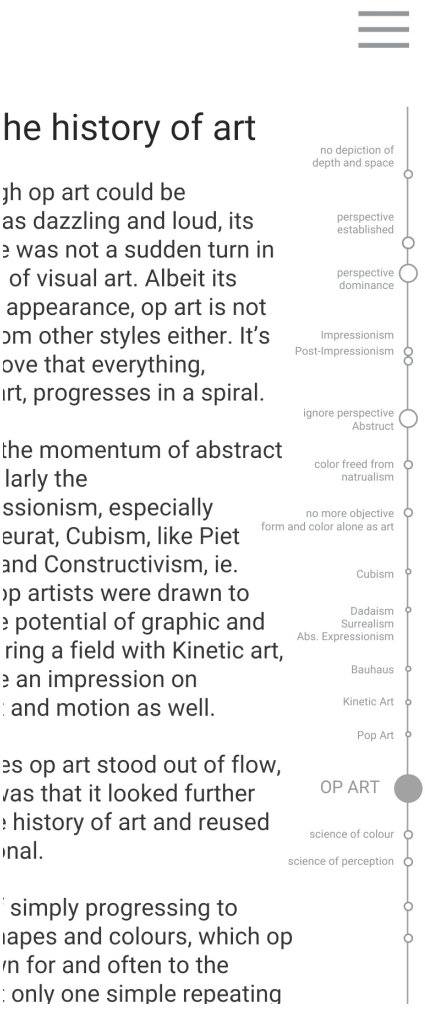
Results:

If present with <, users saw it as back button and said that they expected this button to behave the same way as the browser's back function. When I added the question that what exactly is your browser's back function, and what do you think will happen if you click on the back button twice, some users didn't have the answer. I tested the "go up one level in the site structure" function as well. One user was surprised after the second click on the back button but quickly realised that she's now up a level.

Thoughts:

It's clear that back function is often used, through the button on a website or the browser's default one. And it's clear that the behaviour of such button is crucial for the users, because here is where the users have a clear expectation of what will show up next. If something comes up that surprises the user, he or she would most likely hit back again, almost instinctively, to "cancel" his last click, which could cause even more confusion, if this back does not take the user to where he or she wanted it.

A "going back/up a level in the site structure" function is probably not needed. Such movement in content hierarchy could be achieved by the navigation design.



The timeline on the "History" page

I came up with this design the first time I considered how the "History" page should look like. As it's a page with mainly text, I would like to add a bit visual interests and a timeline seemed suitable for the subject, "Op art in the history of art". I thought about horizontal and vertical line in the "timeline" and considering the amount of info I need to included in the timeline I chose the vertical design for now.

Results:

Four users showed interests in the timeline design, one said "oh here's a timeline" immediately after she opened the page, two of them wanted to interact with the timeline, either by clicking on the circles or by dragging the circle up and down, and got a bit disappointed when they found out the line doesn't move and one said she had never seen this before and thought it look nice and interesting, and would probably zoom in to see what it's about.

One user said she would rather not see the timeline on this page because she didn't know what it's and there's too much text both on the timeline and on the page.

Thoughts:

It's interesting to see that two people showed completely different reactions to the timeline using the same reason, ie. I've never seen this before. One would investigate more, while the other would not see it at all.

It's also interesting to see that some users wanted to interact with the timeline. Originally I planed to make this as a section tag, ie. you click on a era / period / movement in the art history, the page would jump to the part of the text describing that topic. I was not sure if it's too much, but based on the user feedback, this could be a nice touch for this page.

Where to click

This is one of the design questions I've thought the most about. Personally I don't like a website with a lot of descriptive text that functions as a manual. "Click here for more" and indication on every single image that it's clickable seems to destroy the beauty in any website for me. But this is just person preference and I know for a fact that many people hate a website simply because there is no indication and they need to guess where can be clicked.

It's not to say that a website can only be one of these two extremes. In fact, the majority of website sit somewhere in the middle, with some descriptive text to hint the use how to use the site and leave the elements alone without manual if it's well established that these are clickable elements. The question then comes that what kind of elements on a website will be considered clickable by the majority of user? On a laptop version of a website there are more ways to give hint, on top of the text and hint on images mentioned before, a change in cursor style is often enough for user to realise something is different here. On the handheld device where there is no cursor, we need to find other ways and/or make compromises in design.

I tested with two pages, both have a collection of 4 images put together. In fact all the images are clickable and function as link to another page. I wanted to see if the users could realise this, especially when these pictures are displayed with other elements, some clickable and some not, I wanted to see if the user will only click on the most obvious buttons and look pass these images. In short, when presented with a webpage, where would the user click.

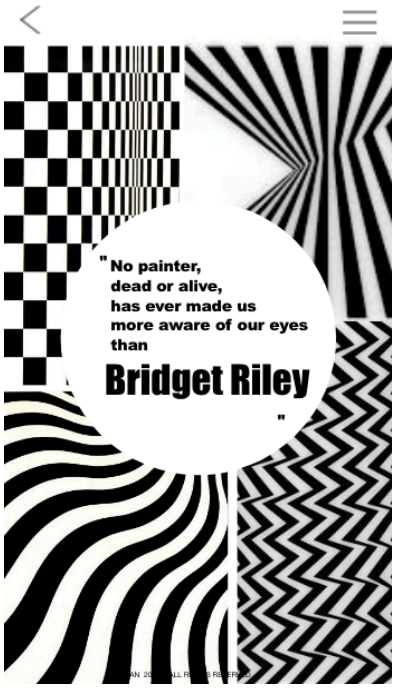
Results:

When this page opens, most user clicked on the middle circle saying that this looks like a button / entrance to more information. When asked about why didn't they click on the images, they said that they thought it's just one big background image that serves no purpose. Only two users clicked on the images, and one of these two didn't click on the middle circle. After clicking on the image, being redirected to another page and clicking on back button to come back to this page, one of the user seemed forgot which image she had clicked and click the same one again.

After I explained that all the images function as link and expressed my consideration and concerns regarding how to make the users realise their function, one user said that it would be a pity if I change the design in order to ensure functionality, and she agreed that if I add hint, any kind of hint, on all the images, the page would look too busy.

Thoughts:

User feedback, ie. no clicking on the images and why, is pretty much the same as I have expected. I was surprise to see that one only clicked on the images but not in the centre circle. Is this a figure-ground phenomenon?

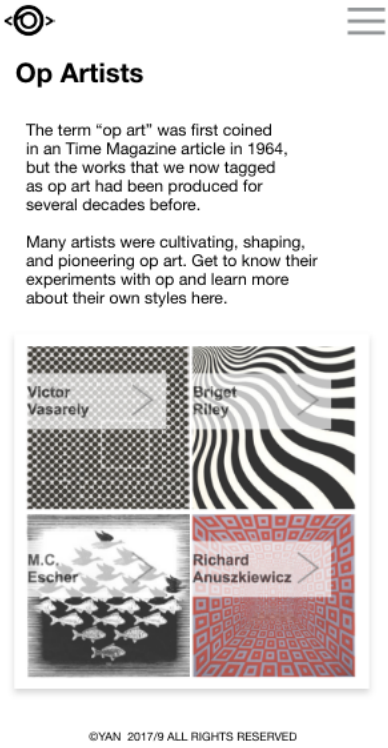


Results:

Almost the opposite reaction to the page above, on this page, three users didn't click on the images with artist names. One said that if the > on each image were smaller he would have considered it as clickable. The second one said she didn't know what these are, the whole area, so just looked pass these. The third didn't stayed on this page for long, and when she later saw another user found these buttons, she said it's actually really nice and if she stayed longer on the page and read a bit more she would have as well realised these images are link buttons.

Other users thought these without doubt are link buttons, some said it's a clever design and one said the texts on the images should be darker.

Thoughts:
I was surprised by the comment that if the > were smaller, they would look more like a link button. I made the > larger on purpose because I worried that the smaller one are hard to see.



Other findings:

One user found the transit animation between pages were misleading, i.e. if a page show the "push up, she felt that a part of the page was cropped.

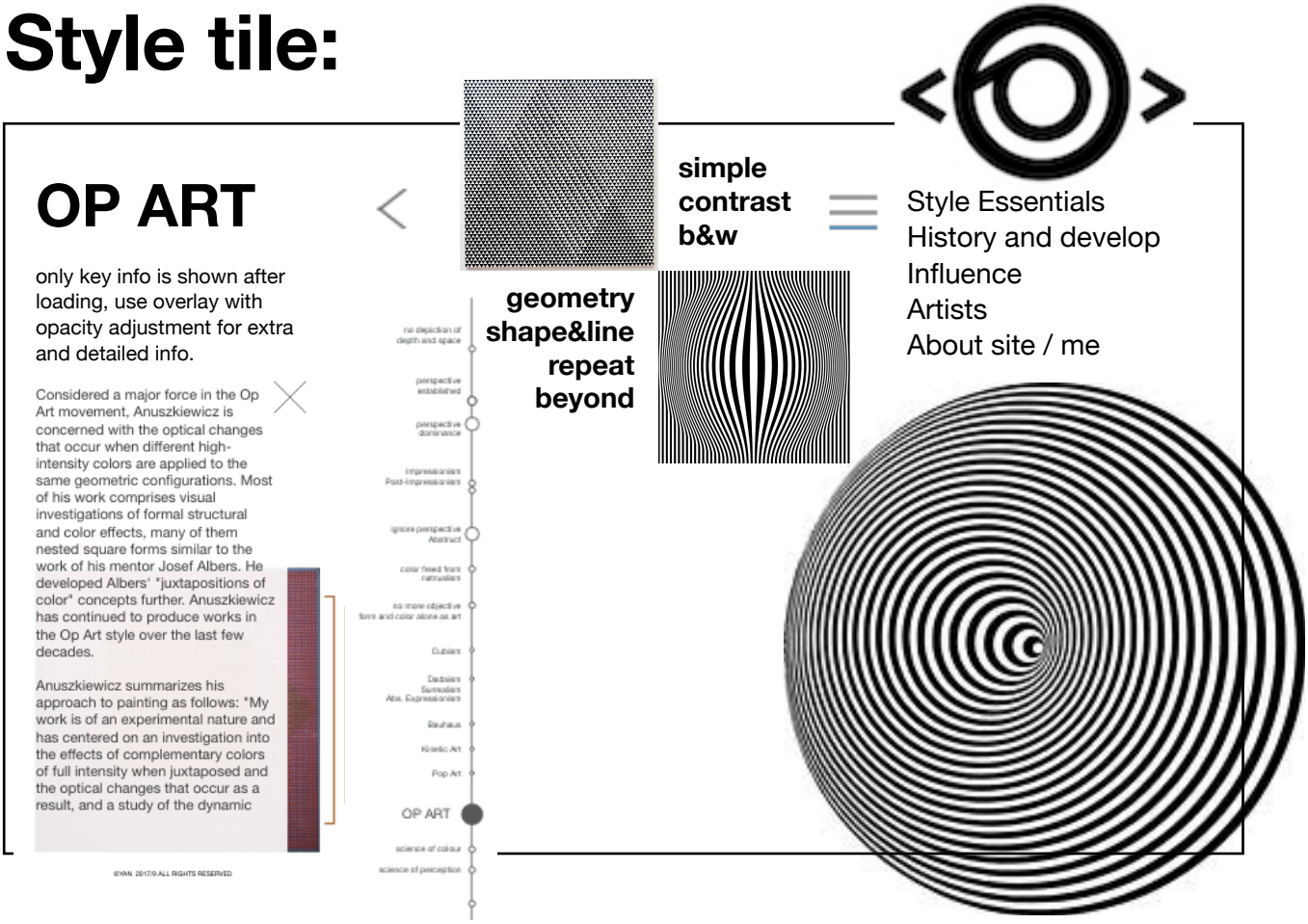
Conclusions from user tests in general:

I think some of the user feedback is useful for every website, and therefor should be considered and in most cases followed as general rules, while other feedback are more specific to this particular site. I am still struggling with the choice between functionality and aesthetic and if I go with aesthetic, considering this is in the end a website about art, I'll still face difference in people's

preference regarding what is visually appealing.

Even though the “where to click” test didn’t go really well on the black and white page, most user liked the style and thought it’s not too much to handle. This gave me the idea that I could try to design the homepage with similar look.

The navigation design depends on the actual structure of the website and the actual structure depends on the contents and how to present them. I should make the decision on whether I use the long or the short page design and go through with it. A long page with lots of sections would be easier to be transformed into a laptop webpage, whereas short and individual pages need to be rewritten in the laptop version. So considering the responsive design and amount of work that needs to be done, the due date, the choice of longer webpage for the mobile version has

its advantages.

Style tile: