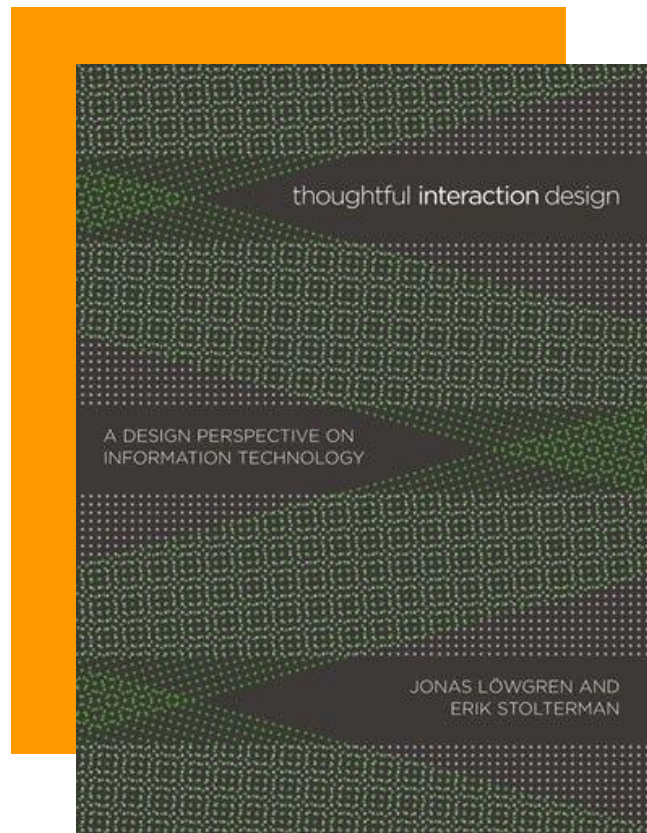


Thoughtful Interaction Design

Arinjit Das | Rebecca Yilma | Natasya Adistana

Overview

In Chapter 1 of ‘Thoughtful Interaction Design’ Jonas Löwgren and Erik Stolterman shed a light on the UX industries continuous struggle to find a concrete definition of *good design*. The authors illustrate possible forms of articulation and address the qualities of a thoughtful designer in a “knowledge construction culture”. They introduce topics such as ethical design, politics of design, and the design process.

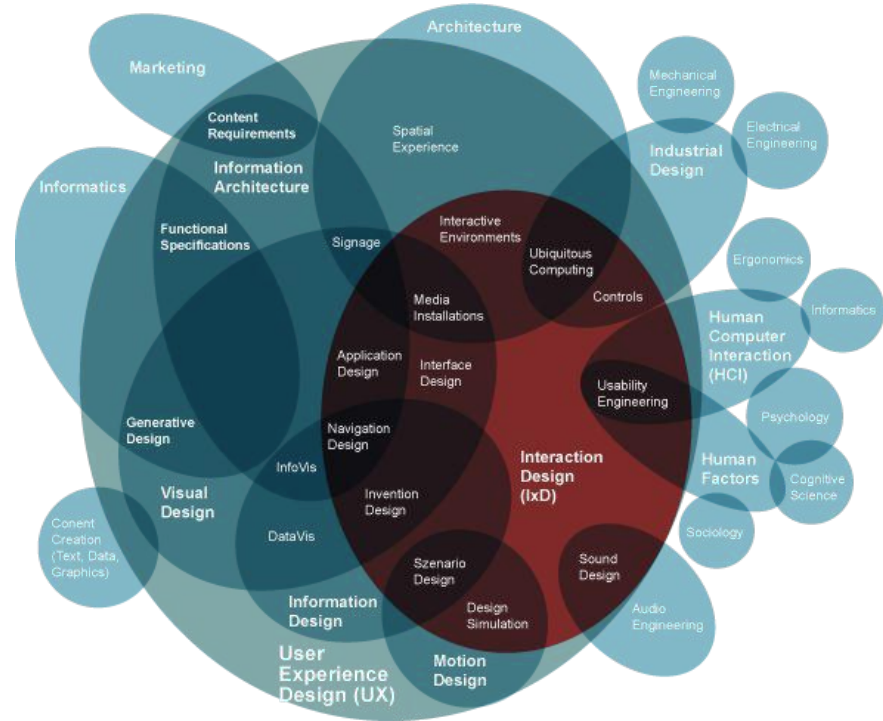


Content

- What is Interaction Design
- Design Process
- Design Dilemma & Thoughtful Designer
- Good Design
- Five Dimensions of Design
- Case study
- Client-Designer Relationship
- Politics & Responsibilities
- Speculative Design

What is IxD?

- Interaction design is the process of creating interactive environments and products that not only tackle the users pain points but aims so be as logical and efficient as possible.
- A common misconception is that IxD and UX are separate categories, in reality UX design is an umbrella for an array of career paths such as marketing, ergonomics, information architecture, and many more.
- Having expertise in more than one field (ex. cognitive science and digital arts) is more beneficial because the designer can envision the users process and concerns through a broader perspective while having a deeper understanding of what the user wants to see.
- Ixd incorporates technology and proven communication philosophies to curate seamless experiences



Design Process

Design Process

- The design process begins when the **initial ideas** concerning a possible future take shape.
- The process goes on all the way to a complete and final specification that can function as a **basis for construction or production**. In some cases, the final specification is identical to the final product.
- Works that constitute a design process:
 - Processes that lead to **construction of new technology**
 - Processes that lead to the **composition of an artifact** by assembling readymade components or configuring an off-the-shelf product



Design Process

Every Design Process is Unique

- The preconditions for design work change from one occasion to the next. This means that design work is **impossible to predict**. If the outcome can be predicted, it is by definition not a design process.
- Every design process is affected by the **people** responsible for carrying out the work and by **existing conditions**, such as available staff, tools, and time.
- The process is also a consequence of the specifics of the design **situation** at hand.

The combination of these three elements—the designer, the resources, and the situation—is always unique, which makes every design process an ultimate particular (Nelson and Stolterman 2003), that is, an ultimately unique instance of a design process.



Design Process

Different Elements

1. Design is about **uncertainty**
2. Design is very much an **ethical activity**
3. Design is deeply influenced by **values and ideals**
4. Design is an **aesthetical activity**
5. Design is a **political and ideological activity**



Design Process Element

1. Design is about uncertainty

- To participate in design work means the designers play a part in a venture that involves **great risks**.
- Design involves **chance**; it forces you to challenge the unknown and to create the not-yet-existing.



Design Process Element

2. Design is very much an ethical activity

- Every design process is a combination of **actions, choices, and decisions** that affects people's lives and possible choices for action.



Design Process Element

3. Design is an deeply influenced by values and ideals

- In every design, no matter how small, there are always choices that in different ways will **lead toward or away from values and ideals**.
- There is an ever-present ethical dimension in design, manifested in the most practical choices and decisions.



Design Process Element

4. Design is an aesthetical activity

- Design processes fill our world with artifacts that influence our lives not only by their functionality but also by their **form** and the way we **experience them in use situations**.
- The importance of aesthetical aspects in design cannot be overestimated as we are all living in a world almost completely artificial and designed, and every new addition, every new design adding to this world, has an impact on how we experience the whole.
- **Every design is a change of our life world**; the designer influences our overall experience of the world as a pleasant or ugly place to spend our lives in.



Design Process Element

5. Design is a political and ideological activity

- Since every design affects our possibilities for actions and our way of being in the world, it becomes a political and ideological action.
- With **designed artifacts, processes, systems, and structures** we decide our **relations with each other, society, and nature**.
 - Each design is carrying a **set of basic assumptions** about what it means to be human, to live in a society, to work, and to play.
 - When looking at **large infrastructural designs**, such as the way we organize society and companies or large technical systems, most people realize how they affect the way we can live our lives. We would like to point out that the same also holds true in a small- scale perspective.
 - Every digital artifact **restricts our space of possible actions** by permitting certain actions, promoting certain skills, and focusing on certain outcomes. To some extent, the user has to adapt to the artifact.



Design Process

Conclusion

- Since design is unique, ethical, aesthetical, political, and ideological, it puts **responsibility and pressure on the designer**.
- Even if designers think that they are only designing artifacts that are extremely small in relation to an almost infinitely complex reality as the most minute, seemingly insignificant, change of the whole design can have **large and unexpected consequences**.
- It is a common situation that a client hires a designer to get help with difficult decisions in a design process. The client has the **overall responsibility for the outcome**, but a designer is still **responsible for the result produced** and handed over to the client.
- It is important to **acknowledge the complex relationships between the client, the designer, and the user in the design work**.



Design Dilemma & Thoughtful Designer

Design Dilemma & Thoughtful Designer

1. Many qualities of a designed artifact are more or less unintended side effects or consequences of mistakes or lack of knowledge.
2. Thoughtful interaction design is built on a thorough understanding of the design process, design ability, the designed product, and design as part of a larger context.
3. Introduction of the notion of a complementary perspective in which the main “products” are not artifacts, but knowledge.
4. The technology constituting our design material is changing so rapidly that there never seems to be time for reflection or for a more thoughtful approach.
5. Not always have such detailed knowledge of the materials we use for digital artifact.
6. Designers of digital artifacts face a particular difficulty that the material they use— that is, the digital technology—can in many ways be described as a material without qualities.



Design Dilemma & Thoughtful Designer

1. Many qualities of a designed artifact are more or less unintended side effects or consequences of mistakes or lack of knowledge.

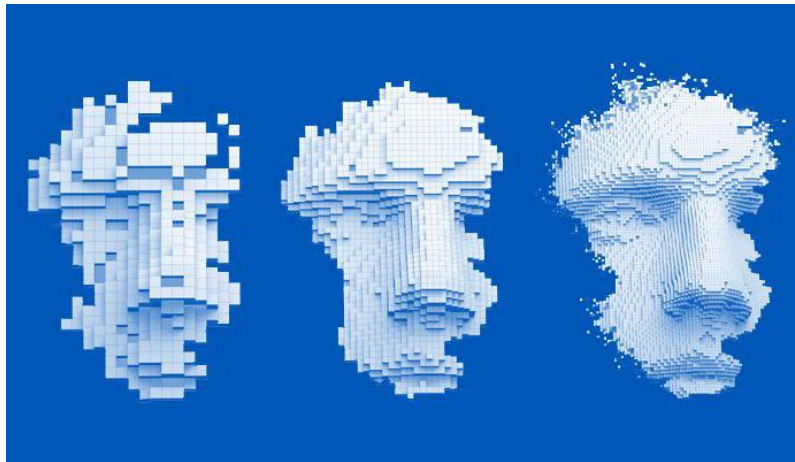
- Irrespective of its constitution, the outcome of a professional design process is the result of a conscious action of a designer. This **does not** mean that all properties and characteristics of the design process outcome are the results of **intentional design decisions**.
- The complexity of design situations prohibits completely rational approaches, which means that **there can never be a perfect design process with a perfect outcome**. Every digital artifact designed by an interaction designer is in some respects imperfect.
- Using imperfect technical artifacts causes **frustration and stress**, and people today are **frequently dissatisfied** with the digital artifacts they want to use or have to use.
- To handle the complexity of interaction design, there are many books in the field to address the problem by **introducing methods and techniques for creating better designs**.
- Believing that normative approaches are not enough, there is a need for a **reflective mind**—label as a thoughtful designer.



Design Dilemma & Thoughtful Designer

2. Thoughtful interaction design is built on a thorough understanding of the design process, design ability, the designed product, and design as part of a larger context.

- Being thoughtful is about **being reflective**. To reflect means that you use your critical mind to examine your role as a designer; it requires you to examine the purpose, outcomes, and benefits of doing design in different ways, and using different methods, tools, guidelines, or theories.
- Being thoughtful is **about caring** for your own design ability, the designs produced, and how the world will be changed by your design ideas and decisions. A thoughtful designer is someone who takes on design as a **serious and important task** and who tries to become a designer with the **ability to create fascinating, authentic, and useful digital artifacts**.



Design Dilemma & Thoughtful Designer

3. Introduction of the notion of a complementary perspective in which the main “products” are not artifacts, but knowledge.

- In many design disciplines, emphasis has been firmly placed on the produced artifacts.
- The professional knowledge of design has been considered more or less tacit, which is reflected for instance in the traditional design school structures of master-apprentice learning and the importance of portfolios and exhibitions.
- We agree that design practice and design learning are strongly dependent on these elements; however, we want to introduce the notion of a complementary perspective in which the main “products” are not artifacts, but knowledge.
- Design knowledge is primarily intended for other members of the knowledge construction culture—including not only designers, but also critics, clients, users, and so on—to share, debate, challenge, extend, reject, and use.



Design Dilemma & Thoughtful Designer

4. The technology constituting our design material is changing so rapidly that there never seems to be time for reflection or for a more thoughtful approach.

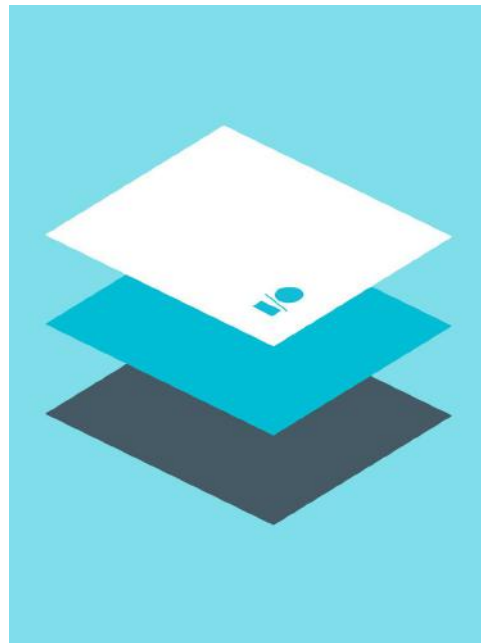
- Why reflect when the things you work with are gone tomorrow and you have to deal with new technology?
- The core of being a designer does not necessarily change as rapidly as the material.
- It is essential to find a reflective position in the midst of changes created by evolving technology.



Design Dilemma & Thoughtful Designer

5. Not always have such detailed knowledge of the materials we use for digital artifact.

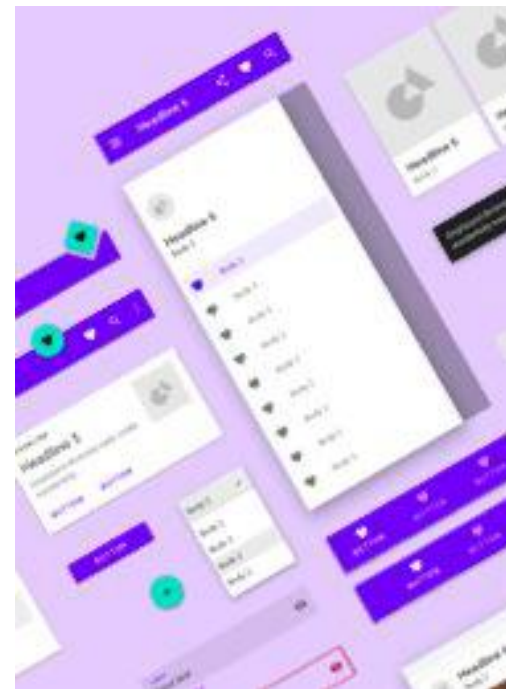
- When dealing with material we know well, it is possible to work with the qualities of that material. Knowing a material well also entails knowing the drawbacks. For instance, we know that wood rots, iron rusts, and that concrete is inflexible once molded.
- Design becomes **more complex when we combine different materials that each have specific qualities**. It becomes very difficult when the material is a composition of both **technical artifacts** and **social systems**.
- If a design process aims to create an information system in an organization, then individuals, groups, and teams can be seen as kinds of material. **The challenge is to design the social “components” together with the technical components as a systemic whole.**
- Such situations **challenge the design ability** through their nearly infinite complexity.



Design Dilemma & Thoughtful Designer

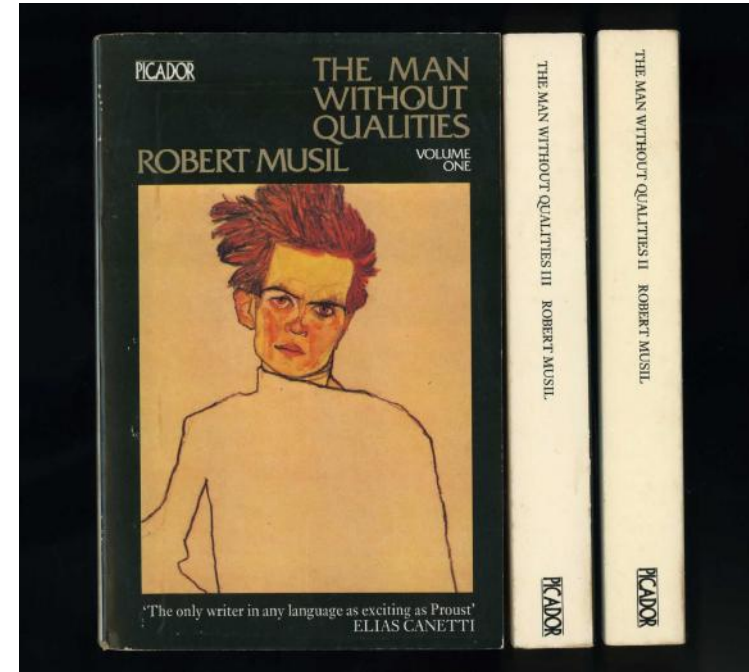
6. Designers of digital artifacts face a particular difficulty that the material they use—that is, the digital technology—can in many ways be described as a material without qualities.

- It is certainly true that the basic technology itself has some fundamental properties. For example, it is based on electricity and on a specific kind of logic, and it normally has quite well-known features, such as a gray desktop box with a screen and keyboard attached to it.
- On a more general level, there are qualities we might now think of as inherent in digital material. Examples include the facilitation of many-to-many communication and the medium's dualistic nature as spatial and temporal.
- However, history demonstrates that most of these material qualities of digital material are **constantly challenged by new technological breakthroughs and new innovations in how to use the material.**
- Over the years, we have **learned to be open to new understandings of the major defining qualities of this specific technology.** So, to some extent we have to consider it a material without qualities.
- As a consequence, **the design process becomes more open, with more degrees of freedom and therefore more complex.**



The Man without Qualities by Robert Musil

- Our thoughts on digital technology as a design material and its qualities, including the rhetorical notion of information technology as a material without qualities, have been stimulated by many sources, including the classic novel The Man without Qualities by Robert Musil.
- In this book, Musil discusses **the relationship between thinking and creativity**. Of course, Musil had no knowledge of our modern information technology when he wrote the book in the 1920s and 1930s, but his general ideas are still valid.
- Jonas Löwgren and Erik Stolterman believe that his work has helped them formulate certain aspects of design that are traditionally not well developed in the field.



Good Design

What Constitutes “Good Design” ?

According to Lowgren and Stolterman, no right answer to the question; designing the designing process is an important step in achieving good design.

Since there is no ‘right solution’ (the existence of one implies it’s not a design problem), what matters is whether the limitations and complexities of the problem were thought through.

Lowgren and Stolterman argue that design can be seen as a thought process where careful awareness, concern and sound judgment are important.

Good designers must let limitations and complexity act as the friction against which their creativity works.

‘Good’ depends on how well was the design realized in relation to the vision, design situation and purpose of the design process.

A photograph of a grocery store vegetable section. The image shows several rows of produce bins. The top row includes bins of green leafy vegetables, red bell peppers, green zucchini, yellow squash, and more green leafy vegetables. The middle row features more green leafy vegetables, a bin of dark brown soil or mulch, red and yellow bell peppers, green zucchini, yellow bell peppers, and fresh cilantro. The bottom row displays various types of lettuce, green leafy vegetables, red and yellow bell peppers, green zucchini, dark mushrooms, and green leafy vegetables. In the foreground, there are large white onions, green leafy vegetables, green zucchini, and yellow bell peppers. The text "Imagine this..." is overlaid in the center of the image.

Imagine this...

Dimension of Design

Words

The 5 Dimensions of design is a guideline many companies use in order for their websites and apps to have a strong presence in a competitive digital landscape.

1st D : The words that a designer chooses to use is very important because it sets the tone for the rest of the app. Designers have to create an experience that feels natural to the user and not like a conversation with a robot. They have to be simple to understand and targeted to specific demographics. Not having a clear vision of who you are writing to is as good as having no words on your product/service.

Example: If one were to open up an app and it said “ Hello, Jen! How can I help you today?” Then proceeds to list suggestions it would be a much more pleasant experience right off the bat rather than the app just stating option 1, option 2...etc.

Visual Representation and Physical Space

2nd D : Visual Representation refers to any graphical element, such as: typography, icons, and diagrams. The way in which users interact with these elements should be intuitive and effortless. Quality of images and cohesiveness of fonts used is important to study because these some of the components that leave a lasting impact on the user.

→ Gestalt Principles (ex. Law of Proximity) is a renowned tool that can be implemented into your design process to help with making interfaces aseptically pleasing.

3rd D: Companies need to make sure that their website supports laptop and phone use by creating responsive interfaces. Objects on screen also shouldn't be cluttered nor overbearing.

→ The use of whitespace is a common way to combat this issue.

Designers take Hick's Law (more options = more time) to decide how many things to present to the user at the same time and how to divide information into bite size pieces

Time and Behaviour

4th D: Time is a dimension that needs to be considered when designing anything with motion and sound.

Reaction time is the duration that the user or service requires to respond to a stimulus. Generally speaking humans don't have that much patience and making the user wait long periods of time to load a screen after they click "submit" or "okay" can become an aggravating factor.

5th D : Behaviour looks at how all the four other dimensions fit and work together. The overall emotional and physiological process is commonly improved by usability testing prior to product launch and then user recommendations/reviews after product launch.

Client-Designer Relationship

Client-Designer Relationship

- The designer might need to pose 'why' to a particular design proposal to understand the situation better and reveal hidden insights.
- May involve educating the client sometimes in the process of designing the design process.
- Design is a social process that includes numerous stakeholders; responsibility of the designer to be informed.
- The Client may sometimes not even be part of the design process; the thoughtful designer must be able to discern who his primary users are, who should be involved more, etc.

Client-Designer Relationship

In order to create and maintain meaningful relationships the designer needs to be empathetic at every stage of the product life cycle. Designers often make design flaws when they confuse sympathy with empathy. Sympathy is the act of being concerned for another's well being. Whereas empathy aims to absorb their feelings and then use that understanding to make an enjoyable experience for the user.

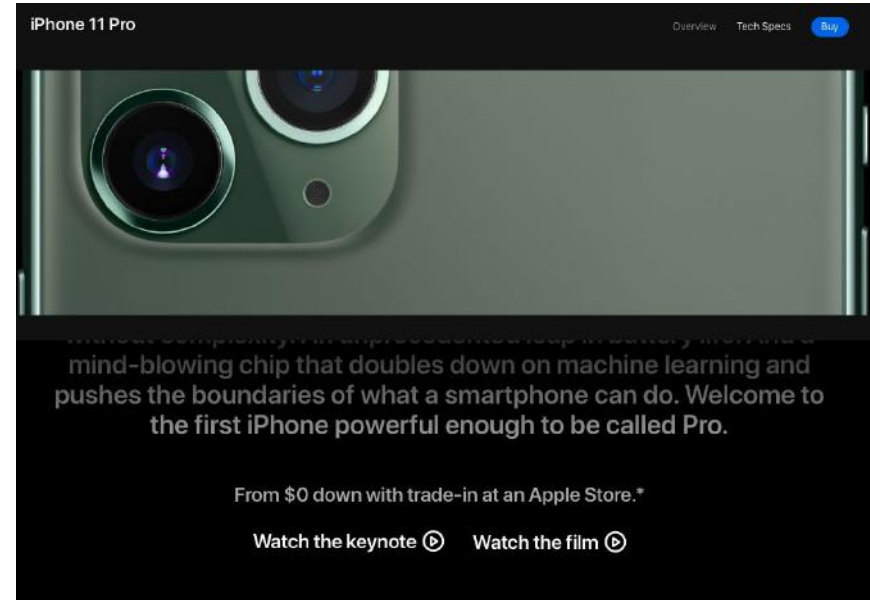
Ways to empathise:

- Ask the 5 W's to create a "User Persona"
- Conduct interviews
- Use photo and video user-based studies
- Engage with extreme users (may fall within target audience)
- Create journey maps

Case Study 1.0

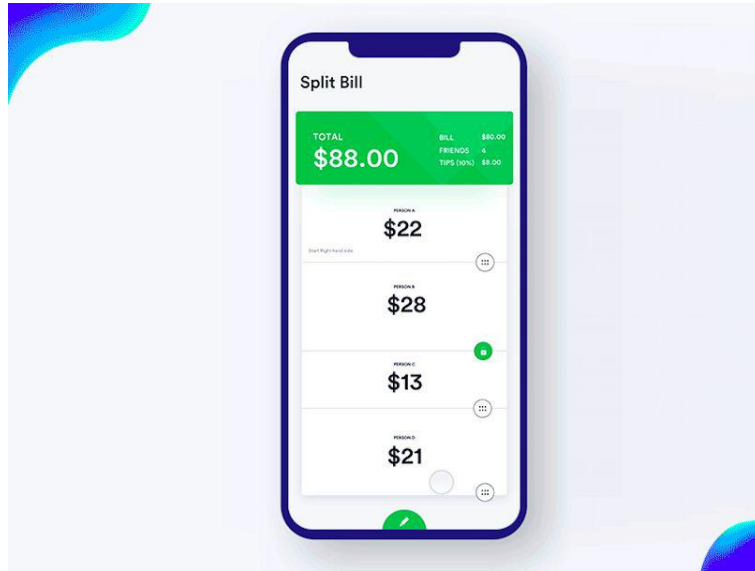
Apple Inc.

- Parallax scrolling is a website effect that has been gaining more and more popularity these past few years.
- It uses many different backgrounds and presents it to the user as a moving screen with depth. It is also known as a faux-3D effect.
- Apple first used it to showcase the iPhone X on their website and it drew in a lot of attention.
- Parallax scrolling allows for a more interactive and less mundane way of reading through phone specs. In addition the “wow factor” it provides brings the user back onto the site multiple times.

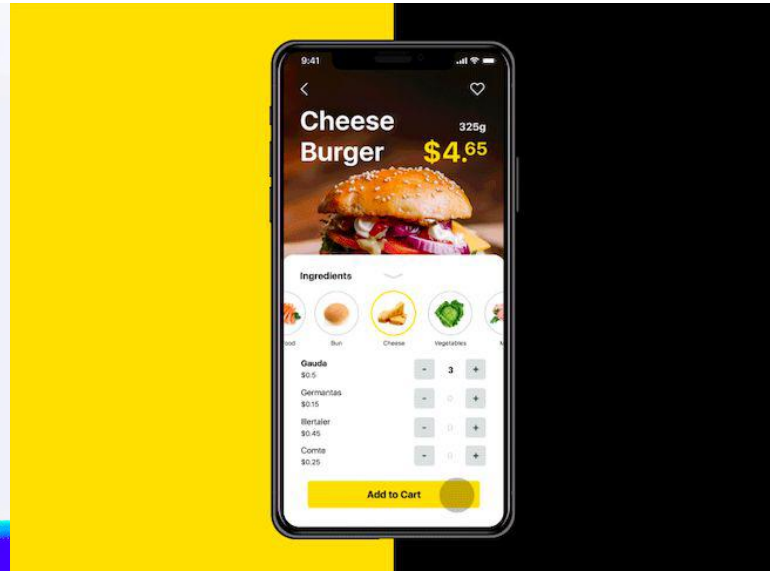


Case Study 2.0

Split Bill & Tasty Burger



“Slit Bill”



“Tasty Burger”

Politics & Responsibilities

Politics & Responsibilities

Not enough to simply satisfy the client; must ask why something is being done if it requires educating the client.

Design makes sense only in the larger social context where its various impacts and repercussions are considered. This can be arrived at only through careful consideration of all the facets of a design situation.

Participating in a design process that is inclusive and has a broad view of who the users are vis-a-vis primary, secondary and tertiary users.

Design is a manifestation of the values and moral imperatives of a designer; fundamentally a way of seeing the world and responding to it.

Anything we design replaces an old order or way of doing things with a new one that has at least some impact and thus altering the world.



Politics & Responsibilities

Camden Benches

Classic example of 'inconvenient design' or 'hostile architecture'

Commissioned for Camden, London to prevent sleeping in public areas, loitering and drug dealing.

Inadvertently made public spaces hostile for the homeless; lauded for its design.

But is it really good design?



Politics & Responsibilities

Camden Benches

Two very different kinds of questions:

‘How might we stop the homeless from sleeping on benches and public loitering?’

vs.

‘Why are so many people forced to sleep on park benches?’



Politics & Responsibilities

Facebook, Infinite Scroll, etc.

Modern social media apps designed to keep users 'hooked' by exploiting our brain's reward circuits

The same mechanisms of dopamine release, the reward neurochemical, that is characteristic of addictions and compulsive behaviors.

A conscious design decision to keep users engaged longer and make ads more profitable



Politics & Responsibilities

Facebook, Infinite Scroll, etc.

...with disastrous consequences for the user



The screenshot shows a web browser displaying a Washington Post article. The page has a dark header with the Washington Post logo and a 'Try 1 month for \$1' button. The article is categorized under 'Health' and has the title 'The Big Number: 3 or more hours a day of social media use hurts youths' mental health'. The author is Linda Seuring, and the article was published on September 30, 2019, at 7:30 p.m. GMT+8. The main text discusses a report from Johns Hopkins and other researchers published in JAMA Psychiatry, stating that 12- to 15-year-olds who spend three or more hours a day on social media are about twice as likely to experience depression, anxiety, loneliness, aggression, or antisocial behavior compared to those who do not use social media. The article also mentions that as youths' social media time increased, their risk of these problems also increased, with those spending more than six hours a day on social media being four times more likely to have these problems than nonusers. A sidebar on the right features a Splunk advertisement with the text 'Bring data to every question, decision and action. The Data-to-Everything Platform' and a 'Learn more' button.

Sections

The Washington Post
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Health

The Big Number: 3 or more hours a day of social media use hurts youths' mental health

By Linda Seuring

September 30, 2019 at 7:30 p.m. GMT+8

Might time spent on social media — YouTube, Facebook, Instagram, Twitter and the like — affect young people's mental health? Yes, says a report by Johns Hopkins and other researchers, published in JAMA Psychiatry. For instance, they found that 12- to 15-year-olds who typically spent three or more hours a day on social media were about twice as likely to experience depression, anxiety, loneliness, aggression or antisocial behavior as were adolescents who did not use social media. As the youths' social media time increased, so did their risk, making them four times more likely than nonusers to have these problems if they spent more than six hours a day on social media.

Of the group participating in the research — a nationally representative sample of 6,595 adolescents living in the United States in 2013 to 2014 — just 17 percent said they did not use social media. Among those who did use social media, 32 percent reported using it 30 minutes or less every day, 31 percent said roughly 30 minutes to three hours, and 12 percent said three to six hours. Another 8 percent said they spent more than six hours a day on social media.

Bring data to every question, decision and action.
The Data-to-Everything Platform
Learn more
splunk>

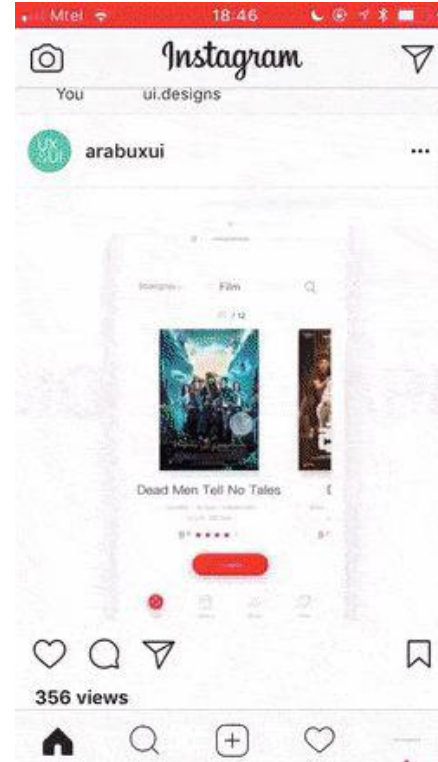
Politics & Responsibilities

Facebook, Infinite Scroll, etc.

Causes compulsive use of social media and disruptions in normal patterns of everyday life

Use and abuse of social media heavily linked with cases of anxiety and depression

Algorithms re-engineered periodically to keep this phenomenon going



Speculative Design

Speculative Design

Design can be a powerful tool for critical reflection and envisioning alternative futures

Not all design that doesn't solve a problem necessarily unworthy or 'bad design.'

Visible, well-thought design projects can spark or promote public discourse on important issues

Design allows us to express ideas with artifacts instead of simply with words



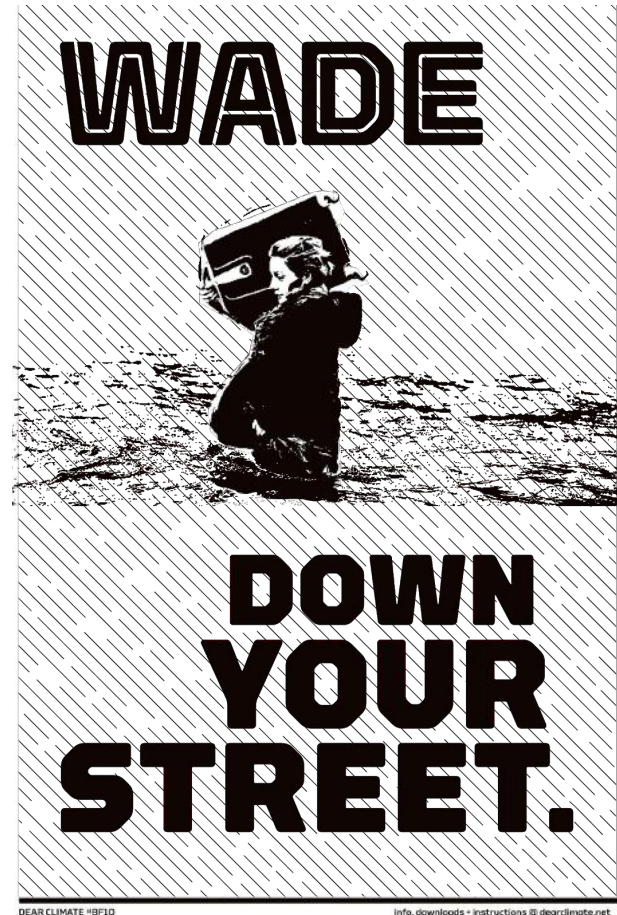
Speculative Design

Dear Climate

Series of posters and podcasts aimed of the 'thinkivist' kind instead of the 'activist'

Instead of offering solutions to climate change, the goal is to change how we view climate change from an anthropocentric perspective to a multi-species perspective

Offers a grim reality of climate change that talks about how we must organize ourselves socially and politically in the face of climate change



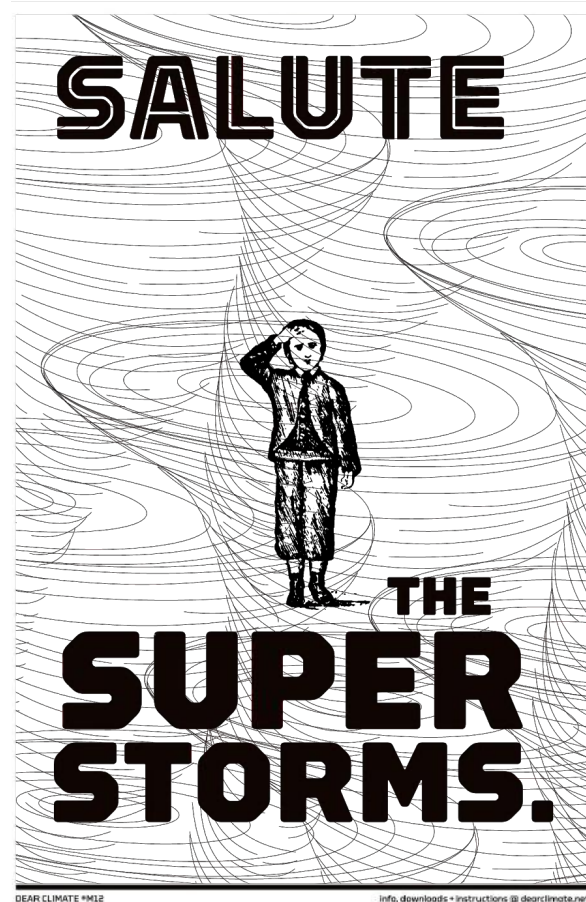
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Speculative Design

Infinity Burial Project

A controversial albeit thought-provoking conceptual design that aims to reconfigure the relationship between humans and our environments

The body suit infused with fungal spores is meant to consume the human body and its many toxins upon death

Challenges the separation between the human body and the environment where the nature is something passive and pristine that must be protected by humans



Speculative Design

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Thank you.

Arinjit Das | Rebecca Yilma | Natasya Adistana