

CONTROL AND QUESTION INTRODUCTION

The obsession that is at the core of this research is one you might recognize. It is an obsession. My obsession with technology. That is the first reason for me to write this essay. I am completely obsessed by the possibilities of the medium but at the same time skeptical about how it is used. Internet: The placeless, time-consuming medium that connects all of the world.

People are always unsatisfied with the internet. It can always be better. Better connection, better apps, better devices. You name it. Everything: better.

I have my doubts about the promises that are connected to the internet. There is the idea that, as long as there is access to information, the world will benefit. And the idea that as long as we keep on, the internet will develop into a better network.

The internet, initially a military network, was opened for commercial purposes - and with that, a more public user base - in 1995. A frenzy followed and now we are here. On the brink of 2k17 and software shapes the world, fueled by glass-fiber connections of hyperspeed: internet. The new water, streaming and overflowing.

A big aspect of technology in general is optimization. The act of making the best or most effective use of a resource.

If you are an engineer at Google you want to optimize search to keep making profit, to in turn make smarter Artificial Intelligence, a better server infrastructure, better self-driving cars, et cetera.

If you are a user of Google, you want to search the best song of the day while you're taking the fastest route to work. To save time. To save money. To be efficient.

Users also want to use the internet in the best way. We are optimizing as well as the people that develop the technologies. What is best is of course totally dependent on who you are and what you want. So these interests of course clash constantly. What is best for Google might not be best for you, and vice versa. But we *are* interdependent.

We have to keep living life with technology. It has become essential to our lives. It's not to be ignored.

I want to question the optimization fetish that comes from technology. It influences daily lives of us all, whether it's first hand or second hand. And it's happening on both sides of the spectrum.

I want to look specifically at the influence the tech industry has in this story. With the tech industry I mean the industry that develops goods, software, services and platforms for us to use. The industry that has Silicon Valley as its Jerusalem (or Alexandria) and that spans the globe. This industry is key to designers because it fundamentally shapes tools that we work with. And more than that. No software, no platform, no service, no device is without ideology. This is where we have to be critical.

I am not an expert of the internet. But I am also going to try to look at these problems from engineering points of view, playing a kind of technological etymology. Etymology is finding and explaining the history of words. I think it's fascinating how this can open your eyes to new perspectives. It broadens your view by looking at a detail.

I think programmers are also not the ultimate experts of the internet. The ultimate experts are the users. People. You, me. We might not know how everything works behind the screens, but we're the ones that know what we want from it. We can identify failure or success without looking at any review, rating, or performance measure. The problem is of course that we cannot directly fix things that bother us. Maybe this is where the designer comes in. The designer is both a user of technology as well as a shaper of content and interface on digital platforms.

With this in mind, I pose the question:

How does design relate to optimization in the tech industry?

CHARACTERS

The thesis deserves an approach that is human, non-factual and sensual as much as it needs a factual basis.

I will adopt three recurring ways of speaking to present my research. They are three characters. The characters represent opinions and attitudes from interviews and talks fused with articles, documentaries and my own personal experience.

I do this mainly because in personal experience there is always the first-person perspective, the world through a shaped filter. It's that view of the problems posed here that I want to expand.

Secondly, many of the things I've learned from the internet is not by reading pages in a book, but reading from online sources. The way we read online is different from the book in the way that it usually involves more people. A Wikipedia article is a crowd-based piece of information, groups of people make articles appear in your feed and comment sections show instant discussion between readers.

And I still believe discussion is the most interesting way of learning. This narrative structure is an attempt to show different sides of the medal.

Th characters are Gonzo, Optimo and the Renegade.

Gonzo is in his mid twenties. Based in The Hague (NL), he is a college dropout. He has a job working at an electronics store. Via a message board on electronics he met Optimo. Optimo is a man, 32 years old. He lives and works in Amsterdam as a Human Resources manager for the public transport company of the city. On his spare time he enjoys going for a run or visiting galleries in the city. On the message board, they also meet The Renegade. He is a bit of a hard one to reach, but has been Moderator of the forum for more than 20 years. Apparently he has been a systems administrator for one of the early internet providers of Germany. He lives in Berlin with his girlfriend.

AS I WALK THROUGH THE SILICON VALLEY

(INTRODUCING THE TECH
INDUSTRY)

Idea of GAFAM.

Public Image

TED - Reverence for technology instead of commitment to technology

Where the startup culture began. Where most knowledge is.

Marked by visionaries / dictators.

Zuck, Steve Jobs, Elon Musk.

Fetish of optimization leads to forced entrepreneurialism.

COMPLEX WEB

REN:

So Silicon Valley is where the ideals of optimization have taken flight. Now, one of the places where optimization makes a huge difference is the back-end of big services and platforms. For instance Netflix or Amazon. The cloud is servers spinning on a rack, interconnected with cables. Wireless is only a half-truth. There are strings attached.

Services designed for our daily lives, things like Uber, Deliveroo, Maps, have all been designed with the objective of 'scalability' in mind. Scalability means that these systems will get better when they grow. These systems optimize by growth. So as they exist, we can now ask: *is bigger better?*

THE CHAOS MONKEY

GON:

True story: Netflix has been releasing monkeys inside their server centers that wreak havoc and shut down parts of their systems. It started with one monkey, but soon an entire legion of apes was formed, each one trained to break another part of the servers.

REN:

In 2012 Netflix released an open source version of this Simian Army. Now everyone can use Netflix' monkeys inside of their server rooms.

At Netflix server centers they have this approach called the Chaos Monkey. This basically shuts down random parts of their server infrastructure with the only reason to see if the system stays up. The system *needs* these little destructions to survive, just like organisms are dependent on smaller creatures or bacteria to survive.

DAO

1. Explain blockchain
2. Explain ethereum
3. Explain DAO crash
4. Speculate.

This has some heavy implications. What if you disagree with a system? If even kicking over that system means that it can learn and regenerate? It's a scary thought. What can you do to be subversive?

Well, like X said, there are still errors to exploit. And I think you should always be on the lookout for those exploits. They usually happen at the fringes of tech or society. In the decentralized network called Ethereum, there was a big crash recently. Let me explain it to you here.

Advantages of distributed networks.

DAO fiasco.

KIVA

OPT:

I love watching this video of the sorting robots in Amazon's warehouses. The Amazon services that use the chaos sorting approach. By making the

Massive selection. 21 million types of items into one system. Robots eliminate the walk that amazon pickers used to do. Everything is delivered to the picker. Fastest cycle times are under 15 minutes. It's all about more product in the same footprint. It doesn't need walk space so the warehouse is more densely populated with goods. Scalable as hell.

Pick, scan, pack. We try to simplify their life and hide the technology. All Kiva Pick workers are happy pick workers.

2

At Amazon, the warehouses no longer store items categorically. Rather, the objects are placed on the shelves according to what's fastest. And in turn, when the item needs to be retrieved, the robots picking up the items find their fastest way. Optimized time in the back allows Amazon to run a huge online shopping experience while remaining fast access.

So what all of these examples suggest is that the bigger a system gets, the more chaos it needs to survive. Order has its limits when it goes too far.

THE REMEMBRANCER

More noisy walks

Reverence / humble attitude in the face of technology.

The siren server.

1. <https://youtu.be/quWFjS3Ci7A> ↩
2. <https://youtu.be/6KRjuuEVEZs> ↩

FILTER TROUBLES

OPTIMIZING COMMUNITIES

REN: A community is usually something that forms over time. Friendships grow, relationships are built up and broken down in smooth motions. There can be a kind of natural organization. I'm not sure if it can be called optimization and if it can be optimized. In online communities there is a whole deal of building, guiding and optimizing, so let's discuss the makeable community.

THE FRONT PAGE OF THE INTERNET OR THE SOCIAL UTILITY THAT CONNECTS YOU WITH OTHER PEOPLE AROUND YOU

GON:

I'm a big fan of Reddit. It's a social news platform spanning about every topic you can imagine. Sports, politics, help groups, the full monty. It's called social news for its ranking system. Users upvote or downvote news that they find good or interesting and earn karma points for participating in the community.

OPT:

I never got around to using Reddit. The interface just isn't comfortable for me.

GON:

Oh, you're really missing out! It takes some patience to get into this thing, but once you're in there you'll wonder how you ever did without it!

REN:

I'll explain some things about it. It's got a fantastic history. If you say reddit, you have to say Aaron Swartz. The Internet's own boy. At a young age he was already involved in developing things like RSS and the Markdown programming language, which is in wide use today. He was an activist for freedom of speech online. And he co-founded Reddit.

GON:

On Reddit, the system in place relies on a kind of direct democracy, but it doesn't exclude all downvoted posts. There is a category for controversial posts which features content that have a small difference between up- and downvotes. Subreddits are there for specific topics.

REN:

Yes, Reddit is a big site. It's content comes from users, the moderators are users and it seems to work. Unlike social networks that want your information to feed you back your own preferences into algorithms, the community learns from each other.

One element that makes it work I think is choice of content. On reddit, you decide what subreddits you subscribe to. Subreddits work around topics, not people. That's the first thing you do when you use the site. You subscribe to smaller communities on this huge message board system. The content comes first, and the people on the site make the discussion.

That leads to another aspect which makes reddit so successful. In the process of delivering content to you, the advertisements stay out of your feed. The platform is essentially non-commercial.

He really was an idealist. Someone who cared for the societal impact of his own choices. He went down in history with a tragic ending, but this showed also his over the top idealism. While studying at MIT, Swartz had access to the JSTOR database. Sharing that is what eventually led to his tragic death.

Aaron Swartz called himself a sociologist. In one of his blog posts that institutes shape culture. He says criticizing culture is too superficial. It makes more sense to look at the institutions behind them.

OPT: How does reddit compare to Facebook?

REN:

Discussion. Reddit trusts people! Which is a key element in open discussion, new ideas, critique, etc. I think design can

learn from this basic element of trust. In many media that are prepared by graphic designers, the audience gets messages dumbed down so much that it almost misses its initial point. Trust your audience, ppl.

In the end, reddit does a much better job in connecting people, and building an online community in the sense that the people using it aren't left feeling trapped or tricked by their own circles, which happens more often in Facebook's community. Ironically, all of our close friends are connected via Facebook while we meet new people on reddit.

If we call Reddit the open community, let's call facebook the filter bubble. Where reddit's content is filtered by people, Facebook uses algorithms. Reddit can be weird not because reddit is weird but because people are weird. Life: it is whhat you make it.

EDGERANK

OPT:

How does that work?

REN:

Facebook works with an algorithm called edgerank.

FLUFF BUSTER'S PURITY

OPT:

I'm using this tool recently for Facebook that's called F.B. Purity. Not really liking it, it looks very Web 2.0. Facebook's interface is always changing so the tool can be pretty buggy.

REN:

Yeah, but it does what you want. You can't always judge a tool just on the looks or user-friendliness. The people making that stiuuff usually do it on their own time and without any payment from anyone! This dude is focussing on the essentials to keep it working. If you think about it, it's kind of amazing. He's like a little David against Facebook Goliath. It's fucking DIY!

OPT:

No, I think I'll give up on it. It takes me too much time to manually add the list items. I want someone or something to do that for me. It shouldn't be that hard, right?

REN:

I'm not too sure about that. I don't think this guy has a big team or a lot of resources to develop it as professionally as a Silicon Valley startup would. But in that is a lot of value, this person is an idealist. It's underground and independent.

GON:

I love this solution, it's clumsy and perfect. Hail the clumsy solutions, the hacks and stooges. 'Cause this is still showing the cracks in the pavement, right? Still showing that people aren't satisfied with what's in front of them.

HAIL THE CLUMSY SOLUTIONS

OPT:

I've switched to Self Control.

You Might Also Like

Every person experiences the world through their own filter.

If looking through the filters of Facebook, these get echoed back to you.

The dérive, psychogeography of Guy Debord, studying the city.

Dériving on the internet is more boring if you do it as yourself.

Because. Does it wrong: Facebook (easy target but hey)

Finding obscure subcultures is great because there is a big-ass community.

1. Aaron Swartz, *Sociology or Anthropology*,
<http://www.aaronsw.com/weblog/socvanthro>
↩

FLEETING TIME

(OPTIMIZING TIME)

Internet. Addiction? – Nicholas Carr

T.O.D. – Time On Device Nathalia Dow Schull

Time Well Spent

Semi-solutions to real problems. Relying on tech for tech.
Like the Rsonic for smokers.

Patience quote from a16z podcast

SELF

(OPTIMIZING SELF)

What's up guys, it's Optimo, and today we're going to talk about self-optimization!

Soylent

REN:

Hey, I was talking to my friend who eats this stuff called Soylent. Have any of you tried it?

GON:

Soylent, the powder that replaces food! Not a big fan. Also it's not available in the Netherlands for now. I'll stick to my mom's boerenkool for now.

OPT:

Yeah, I'm using it sometimes. Soylent replaces 'regular food'. It comes in a powder to be mixed up with water and contains all of the nutrients a human body needs. If I am in a rush or uninspired to cook, this stuff helps.

REN:

So, I hear it's also a sustainable solution for the future of food. My first reaction was that if everyone would eat this food, the entire planet could be very well off.

GON:

What is the secret of Soylent Green?

OPT:

Good one, GON. The Soylent Green movie is actually based on a sci-fi novel from 1966 called *Make Room! Make Room!*

². That book introduced a version of NYC in which overpopulation caused people to resort to Soylent (soy and lentil) and water on ration. The Soylent Green film took it one step further..

All jokes aside though. I know it plays into the sentiment of science fiction. But science is also what makes this stuff possible. Rob Rhinehart – the guy behind Soylent – has a vision of what he calls a world after food. He wants to make it independent from agriculture, eventually. When agriculture doesn't scale with human needs, which he says will happen, this could be the thing to replace it. So it's not just convenient, it's also a step towards a solution for future food problems. According to a report called *How To Feed The World 2050*, the world will have 9.1 billion citizens

that need food. We're going to need to improve things and optimize things and a lot of that comes from science and technology. Soylent is made on the formula of nutritional value per dollar and it is very cost-effective.

GON:

Wow. You make it sound like this food will solve all the world's problems. What about the pleasure of eating? Won't you lose that? I've heard Soylent is kind of tasteless. I think this only works if you care purely about the nutritional values and not societal values, like enjoying a dinner together. The DIY site is quite striking. If I wouldn't know better I would have missed the fact that it was about food..

OPT:

Yeah, that's true. I think the user base see food as a resource or a fuel instead of an experience. And that's totally fine. I think you shouldn't see it as a replacement for food, but rather an addition to your regular diet. Like Rob Rhinehart said, Soylent takes care of my needs through the week and I can eat well on the weekends. There hasn't been such a complete food alternative in the past and now it's also open to development for people that are using it themselves.

REN:

In general I think they're on to something. Food habits have been changing for always. Why wouldn't we cheer this on? If the alternative is more of McD's, this is a step in the right direction. I love how the technology fuses here with real-life.

The people behind Soylent are using their experiences as computer engineers and scientists to optimize food. In their view, everything is made of parts, everything can be broken down. So they looked just at what chemicals a human body needs and put that into one airtight solution.

What I'm really curious to see is where the DIY community ³ takes it from here. They seem to have recognized that what one company (Soylent) can do, they can do too, but more optimized to their own needs.

GON:

This is like the first last step into alien territory. Every aspect of life is built to human needs, and soylent stands for this total solution, which claims to have the answer for all. It's synthetic food, right? That's pretty nihilistic.

OPT:

Well, that's the great thing about it! They claim synthetic is better than natural. Synthetic food means it can be

optimized for *humans*. In that perspective it really is better food.

REN:

You're absolutely right. Looking at the production process, they are handling the environment pretty consciously.

GON:

I just want to stress that the rituals around food are getting lost from ordering in and using these super individualistic rations. There's one missing ingredient in Soylent if you ask me and that's love. Really! It's more key to food than salt. I mean, would you serve this food to your friends?

DELIVEROO

Soylent 2.0: Use Less, Do More

Total food replacements were on the market for years, bigger innovation might be the marketing.

Productivity apps

YouTube's top tier program: YouTube spaces

Please make sure to like and subscribe and as always thanks for watching!

Self-raising people. Nobody in history had such a crazy different generation. Or?

1. Soylent Green is People!!!
<https://youtu.be/9IKVj4I5GU4> ↩
2. *Make Room! Make Room!* on Wikipedia
https://en.wikipedia.org/wiki/Make_Room!_Make_Room! ↩
3. <https://diy.soylent.com/> ↩

CONCLUSION

I don't have the answer.

To make stuff better is not bad. But:

I do think design should be aware of the traps of optimization of tech allows. If there is one thing I've learned is that human beings and our systems have different agenda's. There are some things in life that don't

need optimization. Optimization isn't the same as attention. It gets very awkward when you start believing technology has the answer to all of your problems. But it's tempting. And a lot of times technologies *can* help us.

Ren says at Thu Dec 8 02:43:25 2016:

Some pitfalls come from technology that design should be aware of.

~~~~~> Oversimplification. Very handy in programming, not so handy IRL. Trust your audience, they have an imagination. They don't read barcodes, they read stories, ideas, jokes.

~~~~~> Distraction for the sake of distraction.

~~~~~> Reverence of technology.

Oh, I'm so strict now, all of a sudden.

But, yeah. Gonz, do you have anything to add?

~~~~~> Use tech as your slaves? I think designers are pretty good at this already. Pass that attitude on to users. They know there's more to life than likes.

~~~~~> Design as immunisation: Actively prevent certain innovations from happening.

~~~~~> Be subversive to big systems but learn from them. It can be useful to see Google as your enemy from time to time but it doesn't make sense to blame them for all the problems in the world.

Yeah, optimo, you probably have the last word:

Thanks. I would say, be subversive towards big systems

If you get stuck in a 'Monkey Trap' situation

~~~~~> Ennui principle: Build up and release.

~~~~~> Use the *dérive* as an inspiration. Go with the flows of the stream and find all that good stuff.

And always keep messing with things!