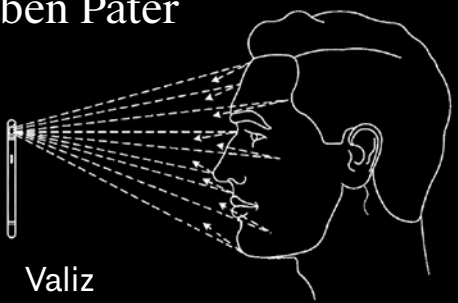
CAPS LOCK

HOW CAPITALISM TOOK HOLD OF GRAPHIC DESIGN, AND HOW TO ESCAPE FROM IT

Ruben Pater



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Valiz

THE DESIGNER AS HACKER

Steve Jobs promised us computers as bicycles for the mind what we got instead are assembly lines for the spirit.

EVGENY MOROZOV

Don't hate the media, become the media

JELLO BIAFRA

THE AGE OF DATA

Every society is shaped by its raw materials. The industrial revolution ushered in the age of coal with its factory fumes and railroad tycoons. What followed was the age of petroleum, with traffic jams and oil barons. Today, the age of data is characterized by e-waste and tech billionaires. But unlike oil and coal, data cannot be seen, touched, or smelled. Still, it manages to fuel economies, sway elections, and earn advertising dollars.

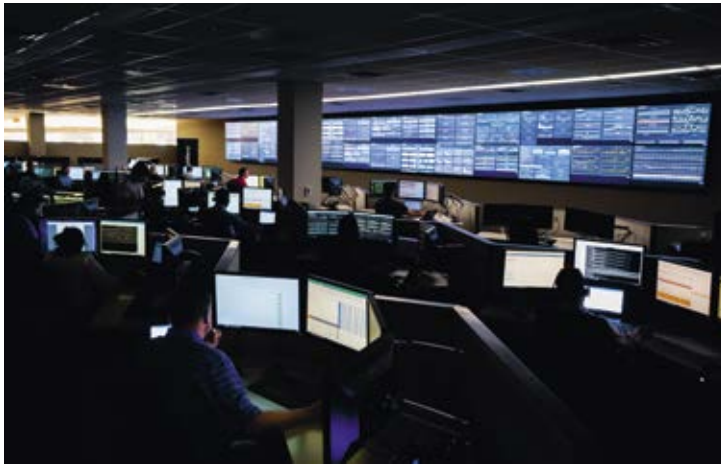
Before the age of data, graphic designers needed access to photo type equipment and printing presses. The means of production of graphic design were owned by companies and rarely by individuals. The arrival of the first personal computers—in the early 1980s—meant designers could be involved with all stages of production. Forty years later, everyone with a computer has access to the same quality of digital media production as professionals.

The shift from analogue to digital design goes beyond the production process. Earlier industrial processes required specialists

from different fields to develop, maintain, and customize technology. Material craftmanship has been largely replaced by an 'upgrade addiction' for graphic design software and hardware, as Drucker and McVarish point out.[1]

The first four chapters of this book looked at how the work of graphic designers serves capitalist production; as scribes, engineers, branders, and salespersons. The next four chapters discussed how designers participate in the economy as workers, entrepreneurs, amateurs, and educators. Now we arrive at the last section of this book. The Designer as a Hacker is the first of four chapters that look at possible strategies that have surfaced to challenge the current economic conditions within design. The hacker can provide a perspective to understand culture and knowledge production that comes from the emerging digital technologies of the twentieth century.

As the production and infrastructure of publishing has radically changed, the designer as a hacker offers potential new roles for designers. The role of a hacker is not just about learning to code or tinker with technology, it is a mentality towards a more ethical digital production. That power is harder and harder to secure, as the online publishing and production platforms are now effectively governed by a handful of billion-dollar companies. This chapter



↑ Blackberry network operation center, Waterloo, Canada.
← CERN Computer Center, Meyrin, Switzerland, 2014.

takes the hacker as an exemplary role of someone who uses technology for the benefit of society, rather than for profit.

What is a Hacker?

A hacker is often thought of as someone who breaks into computer networks with malicious intent. Even the *Oxford Dictionary* defines a hacker as a person who gains unauthorized access to data. This negative frame—sadly brought on by news media in the 1980s—has tainted the original meaning of the term. A 1984 glossary for computer programmers explains that a hacker is 'a person who enjoys exploring the details of programmable systems and how to stretch their capabilities, as opposed to most users, who prefer to learn only the minimum necessary.'[2] Of course there are hackers who break into computer networks and/or engage in cybercrime, but those are called 'crackers', or 'black-hat hackers'.

The term hacker emerged in the sixties at the MIT AI Lab in the US. The term was used for students who messed around (hacked) with the switching networks for model trains. Hackers were interested in building their own computing systems by exchanging expertise and ideas amongst each other. As such, hacking is not limited to computing. A hacker is merely 'an expert or enthusiast of any kind', wrote tech journalist Steven Levy.[3]

Early hackers were Steve Wozniak, who hand-built the Apple I personal computer in 1976, and Richard Stallman, who developed GNU/Linux in 1983 while at MIT AI Lab. Steve Wozniak shared the blueprints and the source code of his Apple I for free, so others could improve and build on it. In turn, his computer could not have been built without the information shared by others at the Homebrew Computer Club in California, of which he was a member. Without hackers experimenting, sharing, and tinkering with technology, we would not have had the computers, smartphones, and the networks we use today.

Now that digital networks are critical infrastructures, the role of the hacker re-emerges at the centre of society. Graphic designers can share their skills across digital networks that are global and real-time. As many of these networks were imagined and built by hackers, they can provide designers with useful strategies and critical insights.

↑ The Tech Model Railroad Club, MIT, 1960s.
↑ Steve Wozniak and Steve Jobs with the Apple I, 1976.

The Political Economy of Graphic Design

Figures are the company's market value in December 2019.
Infographic by Ruben Pater, 2021.


FACEBOOK
$585 billion
oculus
Aol.
yahoo!
TechCrunch
verizon
verizon media
$253 billion
hulu
WARNER BROS.
CNN
HBO
WarnerMedia
AT&T
$283 billion
SHAZAM
Pay
tv
Music
NBC
usa
xfinity
COMEDY CENTRAL
MSNBC
sky
Apple
$1.263 billion
COMCAST
$205 billion

Illustration by Ruben Pater, 2020.

Who Owns the Network

The internet was developed during the cold war by the US military as a communication network that could withstand a nuclear war. Until the 1990s its function was limited to military and scientific purposes. That changed with the invention of the web by British scientist Tim Berners-Lee in 1989. He also invented HTML and the HTTP protocol, and he built the first web browser. Berners-Lee refused commercial offers and convinced the scientific institution to make the code freely available. Initially, as a space for the free exchange of knowledge, the internet was regarded as a commons. Just as the common lands that were accessible for peasants in seventeenth-century England, the internet offered a similar potential for the free access and exchange of information.[4]

The potential for free exchange did not last long. After US congress passed a law in 1992, the internet was opened up for commercial use. Companies rushed in to own parts of the web, sparking the first dot-com boom. Between 1995 and 2004 a digital gold rush colonized the network, changing the internet from a digital commons into a privatized digital space.[5] The extent to which this changed the world economy becomes clear when we compare the wealthiest companies at the time. In 1980 the top ten most valuable companies were large manufacturing corporations such as IBM, Exxon, Shell Oil, Toyota, and General Electric. Ten years later the first tech companies appeared in the list, and today the five most valuable companies in the world are Google, Facebook, Amazon, and Microsoft.[6] Almost all tech companies that produce mostly digital products and services.

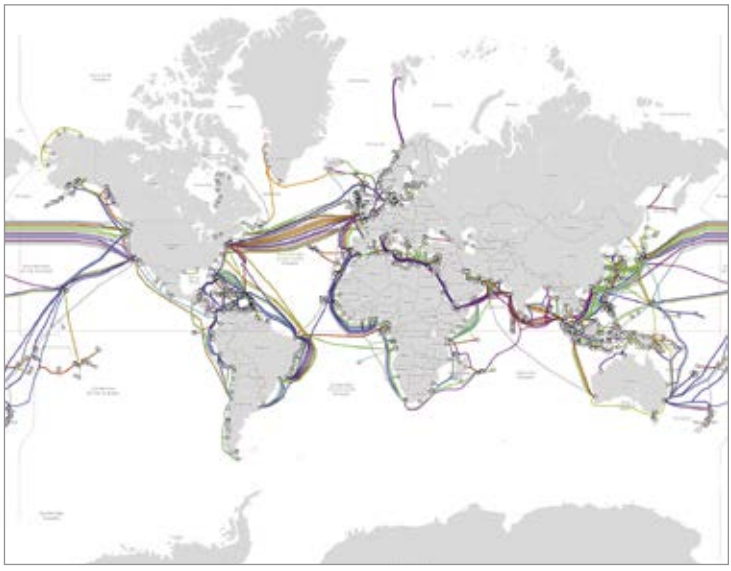
These handful of tech companies do not only own most online platforms, but also much of the physical infrastructure that the internet is built on. 95 percent of the world's internet traffic moves through underwater cables connecting the continents. More than half of this infrastructure is owned by Google, Facebook, Amazon and Microsoft. If you compare the map of today's underwater internet cables, they closely resemble the map of the transatlantic telegraph cables dating back from the 1850s. Internet follows a nineteenth-century infrastructure, which puts the power over networks firmly in the hands of former colonial powers. As James Bridle points out: Latin America's undersea internet cables are

Chart of submarine telegraph cable routes, The Eastern Telegraph Co., 1901.

owned by Spanish companies, and 'the fastest data routes to West Africa still run through London'.[7]

How does the infrastructure of the internet influence graphic design? Perhaps the computers that designers use are made by Apple, their design software by Adobe, their files are stored on Amazon webservers, using Google's internet cables, sent via cell phone towers owned by AT&T, and published on Instagram, ViacomCBS, or WarnerMedia. The production of visual communication today is almost impossible without using the platforms, products, or services of these media conglomerates.

The power that tech corporations wield over visual communication becomes clear with the example of *emoji*, a visual language of more than 1,000 characters used by billions of people worldwide. Like all other digital alphabets, emoji are governed by the non-profit Unicode consortium, which is based in the US. Adding new emoji is voted on by members of the consortium. Its full members communicate in English, and the majority are employees of Adobe, Apple, Google, IBM, Microsoft, Oracle, and Yahoo. What appears to be an international visual language, is in fact decided



Submarine Cable Map of the internet, 2021.

by a small group from the US tech industry, as Aditya Mukerjee explains.[8] Their privilege may be reflected in the lack of emoji for illness, poverty, hunger, and war. Keith Spencer points out in an article that emoji has plenty of options for foods, objects and products: '...they perfectly resemble the market economy that created them, and which has turned everything it can into a commodity. The market has come at last to commodify our feelings'.[9]

The Network Society

'Societies have always been shaped more by the nature of the media by which men communicate than by the content of the communication', wrote Marshall McLuhan.[10] The same could be said about the networks that distribute communication. Less than two centuries ago, visual communication was mostly conceived, produced, and distributed locally. Visual communication was bound by the speed of horses or boats. In the second half of the nineteenth century the telegraph, the telephone, and the radio were invented, all using electricity that allowed communication at the speed of light. Culminating in television and the internet, this

realized a 'a dialogue on a global scale'.[11]

While people need sleep and crops need sun, information never rests and isn't limited by geographical boundaries. The society that emerged with electronic communication is what sociologist Manuel Castells calls the network society. A world economy based on information can stretch time and space to serve the needs of capitalism. In his trilogy *The Information Age: Economy, Society and Culture* (1998), Castells explains that the network society has made time zones and borders almost irrelevant, as flows of capital and information can simply ignore them; spaceless flows and timeless time. In the network society everything is on-demand and real-time; from working and shopping to finance.[12] He believes that inequality will revolve around access to information and technology. A digital divide between those inside and outside the network.

4.5 billion people connected to one network offer a tremendous marketing potential. Any promotional message can potentially be viewed by billions, if the message can survive the daily barrage of visual stimulation. To stand out in the crowd, visual communication in the network relies more and more on exploiting our psychological instincts using algorithms. In the ocean of websites, luring a user to a site is akin to setting a trap. Once you take the bait, the clock starts ticking. The longer we spent on digital platforms, the more ads we see, the more likely we are to make a purchase. UX designers deploy legions of tricks to keep users on websites as long as possible. Infinite scrolling, dark patterns, bright and noisy notifications, intentionally confusing navigation, and auto-play, are some of the tactics that designers have copied from the gambling industry to keep us hooked to our screens.

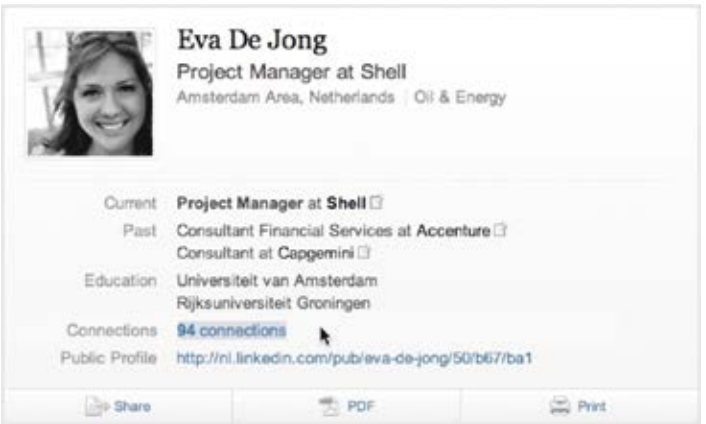
The possibilities of the network can also be emancipating. So much information and connections makes it more difficult to keep secrets. 'Leaks' by various whistle-blowers have exposed large surveillance schemes, tax evasion by the rich, and fraud by corporations. Some designers, like Rogier Klomp, use the availability of connections and information to address state corruption. In his work *Big data: the Shell search* (2013), made with Shuchen Tan, they collected LinkedIn profiles of people who worked both at the

→ Dennis de Bel and Roel Roscam Abbing, *Packet Radio*, 2014. A zine how to turn a cheap walkie-talkie into an internet device can be downloaded on dennisdebel.nl.

Dutch government and Royal Dutch Shell. Their research revealed a revolving door system where the border between the interests of fossil fuel industry and the Dutch state are heavily intertwined. Such 'hacks' show that relatively simple searches on social media platforms, by their sheer volume, can lead to effective narratives.[13]

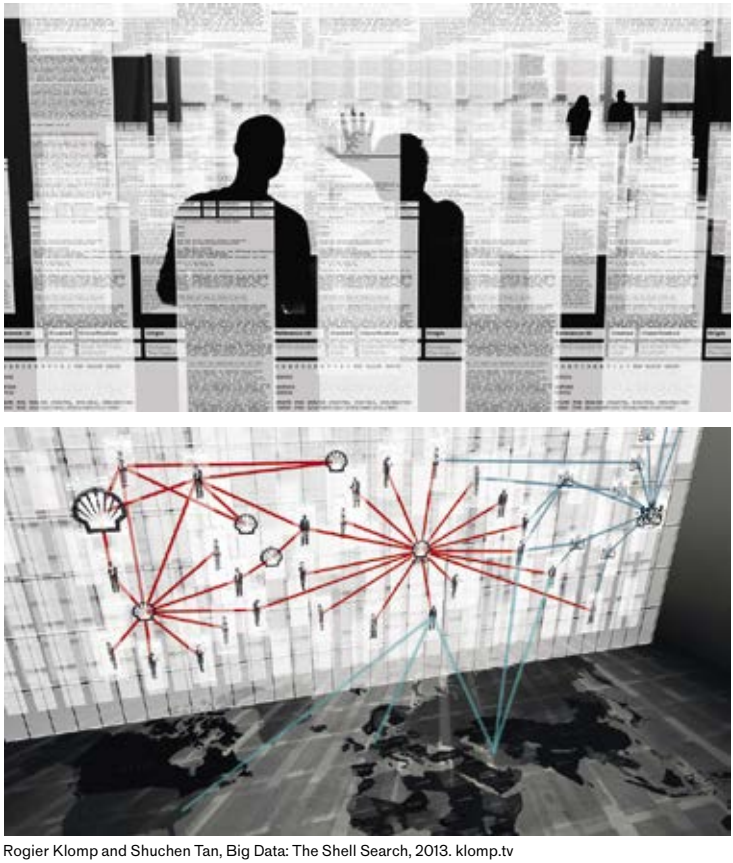
Merchants of Data

If data is the most valuable raw material, then how is it mined? How is it sold? Google was one of the first who pioneered the gathering and monetizing of data in the early 2000s. The first Google search engine used people's input to optimize search results. Individual data profiles were later used to present users with tailor-made advertisements. Reading a person's emails and tracking movements with free services such as Gmail and Google Maps could produce even more precise profiles. 'Content-targeted advertising' had made Google more than $10 million in revenue by 2004.[14]



LinkedIn account of a fake Shell employee for Big Data: The Shell Search, 2013. klomp.tv

Companies that profit from people's data engage in what social psychologist Shoshana Zuboff calls 'surveillance capitalism'. Contrary to the saying: 'If you're not paying for the product, you are the product', Zuboff suggests that our data profiles are the products, not us. People supply the data—the raw material—which is then refined into data profiles. Detailed data profiles can predict what



Rogier Klomp and Shuchen Tan, Big Data: The Shell Search, 2013. klomp.tv

you desire, but also what you will desire in the future. It doesn't just show better ads, it can also nudge people into certain behaviour and predict financial markets through understanding collective behaviour.

The company Cambridge Analytica became notorious by their attempts to persuade people to vote, based on their Facebook profiles. They were hired by Donald Trump for his election campaign, and by the Brexit Leave campaign. Cambridge Analytica gained illegal access to millions of Facebook users' data, and used them to design psychographics: microtargeted ads that manipulate people's behaviour by customizing design and content based

This counter-profiling data will be continuously released on a dedicated platform as notifications, optimized for social media sharing by each visitor. This will result in a distributed counter-propaganda campaign, eventually polluting the social feeds of big tech companies.

DISNOVATION.ORG, ARTISTS

on Facebook profiles. With the right amount of personal data, the graphic designer as a hacker becomes the engineer of psychological warfare. Author James Bridle notes that Cambridge Analytica also employed military personnel, one of whom was the former director of psychological operations in Afghanistan for the British military.[15] Cambridge Analytica's clients Trump and the 'Leave' campaign won, although experts doubt if their targeted ads played a significant role. Vote Leave director Dominic Cummings said about Cambridge Analytica: 'We couldn't have done it without them."[16]

The whistle-blower who exposed the Cambridge Analytica scandal now works for the Forum for Information and Democracy, an independent organization dedicated to 'promote democratic principles in the global information and communication space'. Their 2020 report included 250 recommendations on how to stop false or manipulated information. The most important advice is to 'implement "circuit breakers" for social media so that new viral content is temporarily stopped from spreading before it is fact-checked'. Others are 'limiting the use of micro-targeting advertising messages', and 'banning the use of so-called dark patterns—user interfaces designed to confuse or frustrate the user, such as making it intentionally difficult to delete your account'.[18]

Could the power dynamic of data profiling be reversed? In their 2018 work 'Profiling the Profilers', art and design collective Disnovation did exactly that. Based on scientific research of private data profiles, the collective decided to make psychological, cultural, and political data profiles of big tech companies. They worked together with data scientists using Wikipedia articles to analyse political orientation, ethical orientation, propaganda techniques, biases and addictions of companies such as Google, Amazon, and Facebook. The work was exhibited as an installation together with a website that shows the entire research process.[19]

Pixel Engineers and Time Thieves

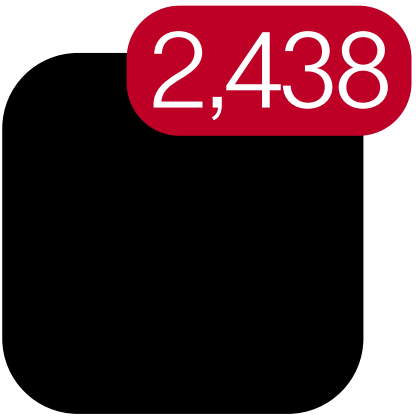
Designing user interfaces used to be a subdiscipline of graphic design. Now rebranded as UX design, the discipline is rapidly taking the lead. Contrary to print design, the effects of user inter-

← Disnovation.org, Profiling the Profilers, 2018–2019.

face design can be measured immediately and in great detail, as we read in the chapter 'The Design as Salesperson'. Programmes such as trackers and cookies collect data about user behaviour. As ecommerce keeps growing—worldwide online sales have almost doubled between 2017 and 2020—each design decision has the potential to be monetized. That makes it difficult for UX designers to resist design tactics engineered to increase sales, or 'conversion rates' on ethical grounds.

In the experience economy, every business must be a digital busines

ADOBE SYSTEMS



A/B testing and programmatic recommendations can create a perfectly engineered interface design that yields the highest profits. UX designer Matthew Strom explains that for a company like Amazon, moving the checkout button on their website could mean losing 'millions of dollars in a single minute'.[20] With that amount of money involved, there is little wiggle room for a debate about the morality or aesthetics of consumer-engineered interfaces. Engineered interfaces have led to a Darwinist devolution of aesthetics, where only the design elements that yield profits survive, leading to an aesthetic of risk-aversion and sameness.

Design ethicist Tristan Harris wrote how UX design has learned

how to make people addicted to their smartphones, and that by intentionally confusing users, using addictive stimuli, and limitations, users can be manipulated into spending more and more time on websites. Real-time communication accelerates the speed of production, with little time to reflect ethically. Harris gives designers the advice that our time is scarce, and should be 'protected with the same rigor as privacy and other digital rights'.[21] Philosopher Franco 'Bifo' Berardi echoes his sentiment: 'Do not forget that your brain functions in time, and needs time in order to give attention and understanding. But attention cannot be infinitely accelerated.'[22]

Stupid Artificial Intelligence

Another quality that separates data from other raw materials, is its abundance. The amount of data is so enormous that it cannot possibly be processed manually. This is why tech companies need to use artificial intelligent (AI) software to process data. Machine learning is a form of AI, where software learns autonomously by using large sets of training data. For example, Google translate was developed by using the transcripts of the United Nations and the European Parliament.[23] Large image sets are used to 'train' programs to recognize images, or create new ones. Xerox developed the Pretty Image algorithm (2011), which curates the most beautiful images from your camera photos, so that you never have to select your own photographs anymore.[24]

Visual AI went from being a scientific field to consumer-ready software, as 'neural filters' are now incorporated in the 2020

Automated designed T-shirts design for sale on Amazon, 2013.

version of Adobe Photoshop. Its 'Smart Portrait filter' can alter the facial expression of an existing person's portrait: '...generating happiness, surprise, anger, or aging any portrait'.[25] Although marketed for personal use, it is clear how such computing power can also be used for manipulation or a culture of visual fake. A *New York Post* article interviewed influencers who said: 'Everyone's editing their photos', adding that being natural on the popular app: '... isn't always financially rewarding'.[26] This pushes visual culture towards an algorithmic capitalist aesthetic; a world of digital fakes and post-truth images, engineered to maximize likes, clicks, and advertising profits.

In 2017, Adobe estimated that almost one-third of all internet traffic is non-human.[27] Those are automatic programs called 'bots' that crawl the internet, luring humans to their generated web shops. Whatever term you search for, you will find T-shirts, mugs, and other results generated for you. An entire production chain of design, production, and shipping automated and without human intervention. These artificial intelligence systems sometimes reveal their true stupidity, like in 2013 when Amazon sold T-shirts that carried the text 'Keep Calm and Rape A Lot', and 'Keep Calm and Knife Her'. It turned out these designs, based on the famous 'Keep Calm and Carry On' design from 1939, were generated with-

Disnovation.org, Pirate Cinema, still from pirated Hollywood video, 2013.

out any human oversight, and Amazon retracted the items.[28]

Contrary to the promise that capitalism creates an abundance of choice, the aesthetics of automation have evolved into a more uniform visual culture. On top of that, access to technology is distributed very unequally worldwide. High-bandwidth internet is limited to urban areas, primarily in wealthy countries. One in four people in the world does not have access to internet, and 60 percent doesn't have a smartphone.[29] Large parts of the world population have to make do with low-resolution images, pixelated cinema, or no digital communication at all. In an essay from 2012, artist and writer Hito Steyerl speaks of a 'class of images', where HD, 4K, and rich visual media are available to those with access to technology and the money to pay for copyrights, while the rest of world is left with visual debris, the so-called 'poor images'. Understanding images as an expression of inequality, reveals the ownership and production standards of images. Steyerl also finds an empowering potential within the poor image: 'The economy of poor images', she says, 'enables the participation of a much larger group of producers than ever before'.[30]

The Hacker Ethic

The data economy has proven to be just as exploitative and proprietary as the manufacturing economy that preceded it. The more digital the work of graphic designers is becoming, the more

the privately owned infrastructure will influence the production process and the aesthetics. The tools that graphic designers use are owned by companies that answer to shareholders: Adobe, Apple, Google, Facebook, and Linotype. They create the code, standards, platforms, colours, and filters that shape a lot of graphic design.

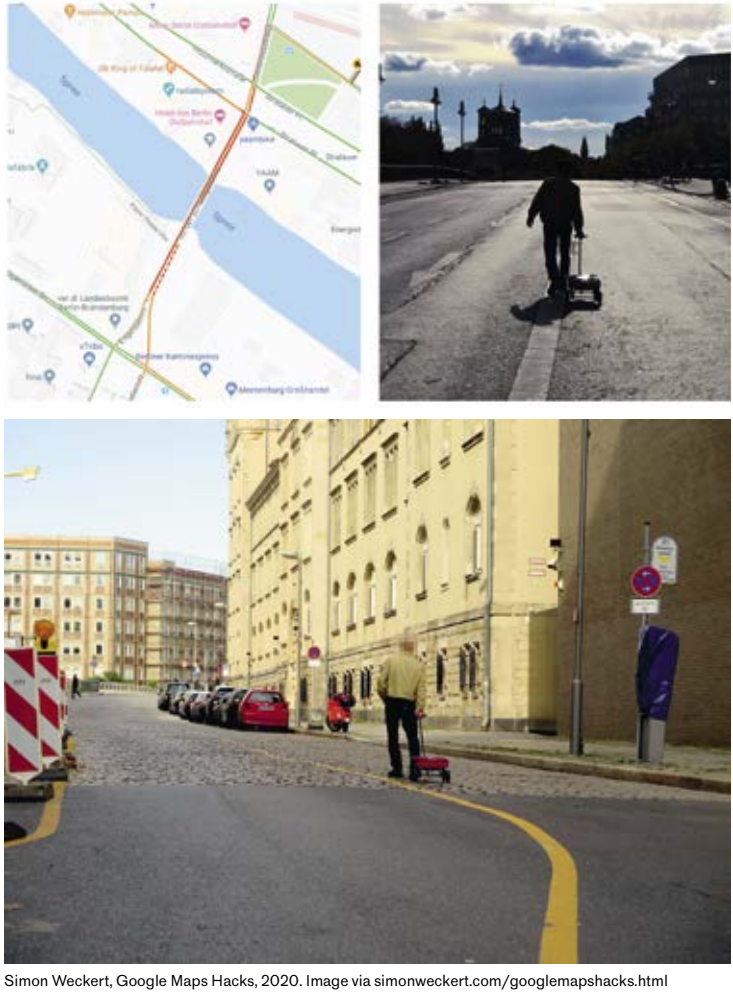
What designers can learn from hackers is that in order to use tools critically, they need to be understood, adapted, and customized. 'Designers need to learn how to write, read, and fix code. They need to get literate before they can call themselves hackers', says Anja Groten from Hackers & Designers.[31] This is why more and more design schools teach coding, so that designers can create their own tools and filters in order to customize their designed output. This makes designers less dependent on preformatted tools from media companies.

Some argue that designers don't need to learn to code in order to understand the tools they use. In his book *New Dark Age*, James Bridle warns that good programmers can be just as uncritical of the economic and social context of technology and that it is more about learning a critical understanding of technology than the skill of coding itself.[32] A good example is the traffic jam that artist Simon Weckert created in March 2020. He noticed that Google Maps uses location data from users to warn for traffic jams. Weckert put 99 smartphones with location tracking in a hand barrow, and walked with it through Berlin. This tricked Google Maps into thinking large buses were jamming the traffic, while there was in fact very little traffic. No matter how 'smart' technology is, a good idea can still outsmart it.[33]

Open Source

The digital technology available today was developed by sharing source codes and hardware blueprints. Artist and developer Roel Roscam Abbing points out that early social media platforms were developed together with users, such as Twitter where the @ and the # were proposed by users before they became recognizable features.[34] Early computer users were also actively building and programming the platforms. The process of peer production is a form of collective making that is also used for websites like Wikipedia.

Richard Stallman echoes Bridle's concern that it's not about



Simon Weckert, Google Maps Hacks, 2020. Image via simonweckert.com/googlemapshacks.html

teaching everyone to code, but about open collaboration. 'Either the users control the program, or the program controls the users.' Free/Libre, or open-source software (FLOSS) can do just that. The source code of FLOSS is freely available so others can modify, improve, and redistribute it. Open source doesn't mean that all software should be free, or that the work of programmers has no value. Stallman explains that this is about software 'that respects

Every non-free program is an injustice

RICHARD STALLMAN, DEVELOPER

Chaos Communication Congress, Leipzig, Germany, 2017.

users' freedom and community'.[35] More and more designers bring the hacker mentality into graphic design, for instance Open Source Publishing (OSP) from Brussels, Belgium. This graphic design collective only uses free and open-source software. One of their activities is designing typefaces with open-source tools, which are released as Libre fonts, 'meaning they are released under libre software licenses that allow modification, re-distribution and use'.[36] In the last chapter you can read more about how OSP makes graphic design using open-source software.

Activism surrounding open-source software reminds us that a reciprocal exchange of knowledge is not a given, but must be defended against continuous attempts at enclosure by capitalism.[37] The software and hardware that is now sold, was in large part collectively built using open-source software, by exchanging ideas and blueprints. Tech companies have understood well how collective sources can be enclosed and exploited. Platforms such as Airbnb and Uber have successfully appropriated resources that were first for free social use, like letting someone use your spare room, or giving someone a ride, and have turned it into the

'sharing economy'. These companies effectively have used a visual language that appears social and community-like, while in fact they are robbing us of our few remaining social potential spaces that we have for equal exchange, while profiting from it. A process that Max Haiven calls 'enclosure 3.0'.[38] This goes to show that these 'commons' where social exchange is possible outside the market, even if it is sharing a room or giving someone a ride, need to be defended against enclosure if we appreciate their social value.

Ethical Digital Design

As we have seen, hacker culture provides a valuable guideline for all critical makers—including designers—in the form of what is known as the hacker ethic. Although not limited to one manifesto or text, it is helpful to quote some of the texts associated with it. First the seminal book *Hackers* (1984), in which Steven Levy says: 'Access to computers should be unlimited and total', and that the hacking ethic is about 'all information should be free', and hackers 'should be judged by their skills, not by their background, ethnicity, gender, position, or education.'[39] The second one is from digital activist and designer Aral Balkan, who co-wrote an ethical design manifesto in 2017:

> Technology that respects human rights is decentralised, peer-to-peer, zero-knowledge, end-to-end encrypted, free and open source, interoperable, accessible, and sustainable. It respects and protects your civil liberties, reduces inequality, and benefits democracy. Technology that respects human effort is functional, convenient, and reliable. It is thoughtful and accommodating; not arrogant or demanding. It understands that you might be distracted or differently-abled. It respects the limited time you have on this planet.[40]

The Dutch collective Hackers & Designers brings together disciplines for hybrid experiments. Anja Groten is one of the founders, and writes: 'Hacking is not discipline-specific.' She sees hacking first and foremost as a social activity. 'The technologies we are building and using are created by a vast number of other people.'[41] Hackers & Designers invite both creatives and developers to

Hacking is a way to emancipate users of technology from being passive consumers to becoming critical makers.

ANJA GROTEN, DESIGNER

experiment in workshops with critical making: a way of engaging with design and technology in a playful manner that challenges ownership of the network. Certain aspects of the hacker have already been appropriated by tech companies and used for profit motives. It is essential that the hacker ethic is not just practiced, but its values should also continuously be defended and propagated.

Designers who are intrigued by the hacking mentality, but don't know where to start: it's a good thing that hackers embrace the digital commons and often share their knowledge. Documentation, tutorials, and instructional videos can be found everywhere on the web for free. A good start are the annual hacker conferences such as Chaos Computer Congress in Germany, and Defcon in the US. All lectures can be viewed for free online at media.ccc.de and media.defcon.org. Artists and designers are regular visitors and speakers, and although some lectures are technically challenging, they often are practical. One of the lectures at Defcon 16 in 2013 explains in detail how to hack outdoor digital billboards.[42] What does the hackers mentality have to offer? Anja Groten from Hackers & Designers sums it up: 'Hacking is a way to emancipate users of technology from being passive consumers to becoming critical makers.'[43]

→ Disnovation.org, Profiling the Profilers, 2018–2019.

Capitalism could not exist without the coins, banknotes, documents, information graphics, interfaces, branding, and advertising made by graphic designers. Even strategies such as social design and speculative design are easily appropriated to serve economic growth. It seems design is locked in a cycle of exploitation and extraction, furthering inequality and environmental collapse. *CAPS LOCK* is a reference work that uses clear language and visual examples to show how graphic design and capitalism have come to be inextricably linked. The book features designed objects, but also examines how the professional practice of designers itself supports capitalism. Six radical graphic design collectives are featured that resist capitalist thinking in their own way, inspiring a more sustainable and less exploitative practice of graphic design.

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