Digital wellbeing, according to Google

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Abstract

In May 2018, Google presented a new initiative called *Digital wellbeing* at their annual developer conference, Google I/O. *Digital wellbeing* consists of part a new design philosophy guiding the company's products, part a set of tools to improve people's relationship with digital technology. Using an STS influenced approach, this thesis seeks to better understand what role Google thinks technology should play in everyday life. This is done by analyzing the keynote presentation of Google I/O 2018, drawing from theories on the social shaping of technology and critical modernity theory, bringing a contextualized understanding of the visions presented on stage and their relation to the products and services that are shown.

The analysis finds the relationship between humans and technology articulated in two different, and not so easily conjoined ways. One the one hand, the *Digital wellbeing* initiative presents digital technology as something one can step in and out of, a distinct domain of the everyday life, put in contrast to "the real world". We can measure and limit our time spent with technology, and the applications provided by the *Digital wellbeing* initiative are presented as means for gaining control over our devices as well as ourselves. Wellbeing in this sense is to be an autonomous subject, able to use technological devices to increase efficiency, and to have the power to disconnect whenever needed.

On the other hand, the overall vision brought by Google suggests a situation where digital technology is fully integrated into daily life, no longer bound to particular devices and always available by voice. It's envisioned as an omnipresent servant that covers more tasks and domains with every software update. The ideals of efficiency and time-saving that permeates Google's vision of technology encourage users to give away control to Google in order to gain control over their time. The lack of control over time spent with technology that users report, is turned into an argument for potentially giving up further control. In the first definition, AI means *artificial*, in the second, *intelligence*.

Keywords: Digital wellbeing; Google; technology; smartphones; science and technology studies; social shaping

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Introduction

"The great thing about technology is that it's always evolving" says the Google CEO Sundar Pichai. He's on stage at the keynote opening Google I/O 2018, the company's annual developer conference[1]. It's a three-day event with talks, product demonstrations and seminars: a celebration of technological progress and the possibilities opened up by it. In a rapidly changing business, the event is all about "showing the progress from last year".

Watching the Google I/O keynote is not just information but a show. Having been worked on over years in secrecy, new technological inventions are unveiled on the big stage, before thousands of cheering enthusiasts. Celebrities demonstrate the powers of AI. Products seemingly appear from out of nowhere, no one knows what is coming next. From medicine and wellbeing to driving and conversing, there seem to be no limits of what computers can do for us. Once made public, new features quickly become available through software updates, delivery times belong to the past. They're invented in Google's labs and brought upon the world.

Google's promises of what the digitally enhanced life can be are constructions of what Spigel et al (2010) call *electronic elsewheres*: representations of a faster, better, or at least different future. Technical inventions have since long had a prominent role when imagining the future, often presented as means for liberation and a better life (Spigel 2010: 58; Jasanoff 2015: 321ff). These *elsewheres* come to us from magazines, advertisements or a sunny stage in California. Listening to the stories told by Google employees echoes familiar promises of new technology alleviating us from everyday chores. In the narrative of constant progress, the solutions to our immediate problems might always be just around the corner.

However, many of these contemporary problems seem to rise out of digital entanglement. Running through the I/O keynote is Google's diagnosis that there is something wrong with contemporary technology. "Our team has heard so many stories from people who are trying to find the right balance with technology" we hear from the stage. People feel tethered to their devices, hindering them to productivity instead of fostering it, consuming time instead of

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[1] This and all forthcoming quotes is taken from the Google I/O 2018 keynote, unless something else is mentioned.

freeing up. Google's goal is to "give users back time" but users blame their stressful present on technology itself.

Despite the magical belief in technological liberation, freedom is always one more step away. "Overwhelmed by the volume and velocity of our lives, we turn to technology to help us find time. But technology makes us busier than ever and ever more in search for retreat" writes Sherry Turkle (2011:17). Turkle's worries echoes those of Jacques Ellul who in the 50s posed concerns about the limitations of the instrumental thinking he saw encompassing more and more of life's domains. "Doubtless, technique has its limits. But when it has reached these limits, will anything exist outside them", asked Ellul (1964:85). With such confidence in the powers of technology, what should be done when the smart devices that so much of our lives revolve around pose a threat?

For Google, the answer is called *Digital wellbeing*, a new initiative to give users a healthier relationship with their technological devices. As the headline on the *Digital wellbeing* website says, "great technology should improve life, not distract from it". *Digital wellbeing* constitutes a general philosophy permeating all of Google's undertakings, putting the users' wellbeing in center. Its values are also materialized as a series of smartphone applications to help users monitor and control the time spent on their devices.

This thesis takes a closer look at the *Digital wellbeing* initiative in order to better understand the values guiding Google's vision of digital technology. What should it be like to be human in a world of algorithms and digital devices? And what role does the technology play in this future? With their prominent position in a world increasingly intertwined with digital technologies, Google have a substantial influence over how digital life is shaped. Not only are they creating the hardware and software used in the day to day life around the world, Google also help shaping the visions of what technology can be and how humans and these technological systems should interact with each other.

Studying *Digital wellbeing* makes a great entrance for understanding Google's ideas, as it shows an attempt to come to terms with some of the problems they see in the digital present. Technology is always evolving. But when it moves in the wrong direction, it forces Google to articulate how things really ought to be.

Research aims

The aims of this thesis are made more concrete in the following research questions.

– How does Google construct contemporary digital technology as a problem?
– What constitutes digital wellbeing according to Google, and how is it addressed through the *Digital wellbeing* initiative?
– How do the values guiding *Digital wellbeing* relate to the other products presented during the Google I/O 2018 keynote?

Taken together, these questions can open up for a better understanding of the human–technology relationship that is proposed by Google. My ambition has been to find out what it can mean to be human in a world increasingly lived with, and mediated through, digital technology.

Background: Wellbeing and technology

Digital Wellbeing is a Google initiative presented in May 2018 at the company's annual developer conference, Google I/O. Short for input/output, the conference is a three-day event taking place in Mountain View, California every spring, where thousands of developers, industry professionals, enthusiasts and journalists meet. In typical Google fashion, spatial presence is not required to experience the event, as all the sessions are recorded and broadcasted online[2].

The opening keynote at the conference is aimed towards the general public, an audience thought of as potential consumers rather than software developers. Focus lies on what the products can do, and how they can be integrated into everyday life. They are demonstrated without much use of technical jargon, providing little information about the mechanisms that operate behind the user interfaces. The event provides a good opportunity to study how Google envision how people in general should integrate their services in their day-to-day life.

Part of the keynote focuses on both the threats and possibilities with digital technology. Google's CEO Sundar Pichai explains it as following:

> It's clear that technology can be a positive force. But it's equally clear that we just can't be wide-eyed about the innovations technology creates. There are very real and important questions being raised about the impact of these advances and the role they'll play in our lives. So, we know the path ahead needs to be navigated carefully and deliberately. And we feel a deep sense of responsibility to get this right.

Digital wellbeing can be understood as Google's answer to these questions. Encapsulated under the slogan "Great technology should improve life, not distract from it", the *Digital wellbeing* initiative is presented as a general philosophy running through Google's products and services. *Digital wellbeing* is an attempt to help people get a better relationship with the technology in their lives by focusing on four areas: Understanding habits, focus on what matters, help switching off, and help families find the right balance with technology.

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[2] Upwards of 100 hours of material is uploaded from the three days to the official YouTube playlist. It's a cheaper alternative to the 1175 US dollar tickets and can be accessed here: https://www.youtube.com/playlist?list=PLOU2XLYxmsIInFRc3M44HUTQc3b_YJ4-Y

In addition to these general guidelines, *Digital wellbeing* include some concrete tools for users. The *Digital wellbeing* app that is built into Google's mobile operating system enables monitoring of all user activity on the device, showing how much time is spent on the device and in various applications. This detailed information can then be used to diagnose ones' habits and set limits to better manage ones' time. Google's aim is to "create healthy habits" by "giving everyone the tools they need to develop their own sense of digital wellbeing".

In order to help people focusing on what is most meaningful for them, Google suggest not only to limit smartphone use, but also to "Make Google do it", by letting their services alleviate unwanted tasks for its users in order to free up time.

Although Google is the main interest of this study, they are far from the only company who recently have introduced initiatives for helping users to create healthy relationships with technology. Last year, Apple released the app Screen time, which lets users monitor their time spent and set limits where needed. Facebook and Instagram have presented similar dashboards for users to monitor themselves. There is also a range of third party solutions for people who need metricize their phone use.

These recent attempts to give users better tools for reaching wellbeing in online environments is perhaps a changing trend toward users' wellbeing. Philip Brey (2017) notes that designing technology for users' wellbeing is "still in its infancy", however with "some promising approaches" (2017: 8). One reason for the lacking focus on wellbeing in technology can be that the desires of the users not always coincide with those of the producers (Hayles 2012; Zuboff 2019). Users desire for spending less time with technology may mean a direct loss in revenue from makers of technology, and, as Karppi (2018) shows in a social media context, might lead to companies rather changing their services to make it harder to disconnect.

Another problem in designing technology for wellbeing is the elusiveness of the term itself. Wellbeing has a different meaning for different individuals, which makes it hard to determine objectively (Brey 2015). But despite its subjective nature, designing technology for wellbeing is not impossible (Brey 2017: 8). Taking mobile phones as an example, Brey argue that designing technology with wellbeing in mind should consider not if mobile phones are inherently good or bad but how their experience can be improved (2017: 9). This is an approach that is echoed in the *Digital wellbeing* initiative, trying to improve current technological devices

through software updates. The same mobile communication devices can then be both the threat to a good life and the proposed facilitator for it (Verbeek 2011: 120).

Perhaps initiatives like *Digital wellbeing* and Apple's *Screen time* can incite further research on technology designed for wellbeing, an area scarce on scholarly work. Brey (2015) highlights a lack of methodological development and case studies (2015). The subjective nature of wellbeing and the insufficiency of looking at the technological products themselves in order to understand their effect on wellbeing, call for more case studies to provide "in-depth studies of how technologies function in the life of users" to help create healthy technology (Van de Poel 2012). Modern technology and life quality is also the topic of the anthology "The good life in a technological age" (Brey et al 2012).

Methodological foundations

Because I am interested in how the concept of *Digital wellbeing* is envisioned by Google, this thesis will be based on a social constructionist approach. Social constructionism asserts that while there is a physical world that exists independently of us, our knowledge about that world is socially constructed (Couldry & Hepp 2017: 21). This means that *Digital wellbeing* should not be treated as a stable concept that is clearly defined and then just worked towards, but a normative construction made by Google. Depending on what properties are assigned to a concept like wellbeing, different solutions will be favored. In short, how the problem is conceptualized will shape the solution, and by looking closer at the Google presentation, we can get a better understanding of Google's idea of a better world. Therefore, a fundamental part of this study lies in examining what beliefs are expressed and what language is used by Google to shape certain assertions about the world.

With this methodological foundation, the methods are not meant to be seen as means for finding knowledge about the objective nature of reality. An account of how 'things are' is not fruitful to seek with interpretive methods (Saukko 2003: 9). Social sciences shouldn't try to emulate the truth claims of the natural sciences but emphasize the contextual dependency for understanding about social phenomena (Flyvbjerg 2001: 4). The way in which I'm doing so is presented below.

A qualitative case study

Since this study is based on the assumption that technology is shaped by the social, I have chosen to incorporate both the social and material aspects of technology that are presented at Google I/O 2018. This is done in part by at what is said about human–technology relations, and also seeing how the products and services shown relate to what is said on stage. More specifically, I want to understand how the range of Google products fit into the *Digital wellbeing* initiative.

In order to gain a deeper understanding about the questions posed above, I'm doing a qualitative case study. The case study has the benefit of taking a clearly defined empirical material and examine it thoroughly (Merriam 2009: 40). In this way it is possible to get near the object of

the study and see it from several aspects, with the intention of getting a deeper, more nuanced understanding of what is explicitly shown at a first glance in the presentation. The keynote is one mediated event among many steps of mediation: from technological innovation, to event, to YouTube, to my screen. Using the Google keynote as a clearly defined material can provide better insights to Google's overall vision of what role digital technologies should have in people's lives, while at the same time keeping the amount of empirical material manageable (Merriam 2009: 54).

The main method for doing this is a qualitative text analysis. Here I focus on the speakers on the stage, and to interpret what they say. What is Google's idea of a good life and how do they describe the role of technology in achieving this?

I have found inspiration in the work of Lynn Spigel (1992; 2010) on discourses about the place of new technology in people's lives. In magazines, advertisements, news and popular culture in general, representations about new technological inventions help people form an understanding of how to incorporate them in their lives. As Spigel (2010: 58ff) shows, technology often play a lead role in imaginations of the future, often as means for overcoming the problems of today. From this we also understand that these new products are not just something to add into everyday life, but that helps creating and transform the preconditions for our lived experience. My approach here is to reflect on how the products shown at Google I/O, try to tie together the discursive element of the presentation with the material reality it addresses.

Technology companies have a long tradition of displaying their products in settings that show how they should be used, and in that way providing their material affordances with a normative dimension (Spigel 2010: 58). There are several ways forward with technology, as the theoretical framework suggests. This method is developed with the aim of understanding Google's utopian vision and how they seek to convince us that it's the best one.

This method has similarities to what Saukko (2003: 126ff) calls genealogy of the present. Traditionally, we think of genealogy as an archaeologic method for tracing discourses. When I seek to understand the role of humans and computers that emerge in Google's vision, it is done by "following statements that begin to recur in diverse areas of life, weaving together a

discursive formation with its specific social and political connections and effects" (2003: 127). How are different areas of life relating to each other in Google's proposed vision?

Since *Digital wellbeing* is a new initiative and therefore lacks scholarly research, I have tried to make use out of the privilege to be able to approach the material without too many preconceptions about what to find. Therefore, an inductive research process is chosen as it encourages the researcher to be guided by the findings rather than a preset theoretical framework and be freer in the interpretation (Merriam 2009: 15). This method allows me to move back and forth between empirical material and theory, to revisit the material with new theoretical insights in order to do new observations. All of this, however, is not to say that I have entered into this process with a blank mind, but rather trying to follow the material as much as possible and build a theoretical framework from the findings (2009: 16).

More concretely, my research process started with some initial scouting observations of the Google I/O 2018 keynote, which is accessible in full on YouTube (Google 2018). The unedited presentation runs for an hour and 46 minutes and consist of a walkthrough of Google's new products, services and projects, aimed towards consumers. After getting an overview I found some themes that helped me approach the literature. The initial findings included a recurring mentioning of giving users back time with the help of technology and the focus on rational behavior and fear of falling into irrationality. The belief in progress and digital technology is not unexpected when it comes to a company that operates in computation and data business, but this trust became more interesting when seen in relation to the problems that Google see with digital technology, especially smartphone overuse. Another initial theme I found was the discussion whether people should use their devices less or more, which seemed to differ across the keynote. These preliminary findings helped shaping a relevant theoretical framework. With new theoretical knowledge I have then went back to the presentation again, and made new findings, while at the same time reevaluating theory and material. This moving back and forth between empirical material and theory allowed for new findings and a successively broader understanding of the human–technology relationship proposed by Google. As this course of action suggests, my goal has not been to provide a final objective answer on the questions posed, but a deeper understanding of the relations between humans and digital technology.

There are some implications for the validity and reliability of the chosen method. The qualitative inductive method puts the researcher in a central role of the process, interpreting and

deciding what is in the material. This makes for low replicability: if someone else were to examine the Google I/O keynote, some other findings are likely to occur. This, however, can be seen as a benefit of the method. Following Flyvbjerg's (2001) advice on the strengths of qualitative case studies, I have here provided a narrative, "gradually allowing the case narrative to unfold from the diverse, complex, and sometimes conflicting stories that people, documents, and other evidence tell them" (Flyvbjerg 2001: 86). The question about technology's place in people's lives is a big one, this case study provides one way to manageable approach it.

Living with technology

This part will provide a theoretical framework for the analysis and situate it with previous research. It is split into three parts: the first one addresses the relationship between the social and the material, the second focuses on time and technological help for self-optimization. The third part discuss technological integration into the everyday life.

The social and the material

What is the relation between technology and society; the material world and social? The first part of this chapter will investigate some different approaches for the interplay between the material and social, drawing from Science and technology studies, philosophy of technology and critical theory. These fields are brought together by Feenberg in his critical studies of technological progress and social change (2002; 2010).

Science and technology studies turn against the common theme in social sciences to focus on either the material or social, which in media and communication studies is expressed as a division between producer/content and audience, treating the two as distinctly separated from each other, usually with a focus on the social. One possible reason that this happens is that technology often is perceived as something that's "just there" and therefore escapes critical analysis (Orlikowski & Scott 2007: 436). Analyses focusing on the textual dimension of communication may neglect the mediating role of technology, and vice versa.

Instead, technology should not be seen as an isolated phenomenon but deeply intertwined with the social (Feenberg 2010; Gillespie et al 2014). To understand modern media technologies, one should therefore aim to understand the context in which they emerge and are inescapably related to. Scholars such as Feenberg reject a technology determinist view of society for being too simplistic and lacking the nuances of how it emerges and how individuals engage with it. Although technology often "is perceived as autonomous, and technical disciplines present the effects of past social influences as purely rational specifications" (2010: preface), concepts such as linear progress should be problematized but showing how technological inventions have looked different across the world depending on what views have been guiding them.

If technological development is deeply embedded in society, this means that there is no obvious right path forward with technology; invention and use are subject to social struggle (Feenberg (2010; Wajcman 2015: 4). The need for bridging the material and social becomes evident when looking at, for instance, the early days of the telephone and radio, mediums that both could have been used for mass communication as well as point-to-point contact. In the words of John Durham Peters, "the issue is not so much the inherent properties of the medium as the social constellation of speakers and hearers that became enforced as normative" (1999: 195).

Turning this assertion to the digital technological devices that Google have built their business around, there are countless possibilities that are not utilized in the mobile phones we have in our hands; either dismissed as 'bad ideas' or not even thought of (Feenberg 2010: 10). The plethora of smartphone apps all share that they are suggestions of what our devices can or should be. New software can reshape a device and make us see it in a way. It's on this condition that *Digital wellbeing* aim to change our relations to digital technology through updates of software and mindset. Google believes that the very same phone can be made less of a threat and more a utility.

With apps 'creating' mobile devices this become evident, but it goes with all technology. So instead of treating Google's innovations as an autonomous force moving forward through linear progress, Feenberg (2010: 7) encourages to better understand what unarticulated beliefs (politics, ideologies) are guiding its origin. "If technology has many unexplored potentialities, no technological imperatives dictate the current social hierarchy. Rather, technology is a scene of social struggle" (Feenberg 2010: 13). The following parts will develop the theory on how the social shape the material and vice versa.

The social shaping of technology

The social shaping approach asserts that technological inventions are primarily a reflection of the society in which they are created (Wajcman 2015: 165). They are materializations of a particular sociocultural context (Feenberg 2010: 70). This approach downplays the agency of modern technology: it's not the smartphones fault that people are stressed, but rather the social norms that make people unable to let the work mail be outside office hours. Although the material preconditions for use are the same for everyone using an identical mobile phone, for

instance, different people might find varying use of the same device. When technological change is seen as its own force it risks having scholars asking questions like: "How should we adapt to technology?" (MacKenzie & Wajcman 1985: 3).

Because technology is shaped by the social context that it stems from, it becomes important to understand who produces the technology of everyday life. Large tech companies such as Google have the power to influence the reality for people all over the world, and in their services, it is reflected what these companies consider important and not. Both Wajcman (2015) and Feenberg (2010) express criticism towards the geographical concentrations of tech companies in Silicon Valley, arguing that the devices that play such a central role in our lives are often developed in a different context than that of its users. This risk fostering technology alienated from everyday experience (Feenberg 2010: xvii). By studying technology as deeply related with the social, one can uncover the material affordances that invite its users to use it in certain ways and what beliefs are guiding such affordances (Gillespie et al 2014: 23).

Such an approach becomes useful in studying *Digital wellbeing*. The technological inventions that are meant to help people get a better relationship with technology and improve wellbeing, are created with certain ideas of what those terms mean, and that culture is reflected in their materiality (Light et al 2018). Companies like Google might help us feel better, but in doing so they also help define what that means.

Given that a technological object is shaped by its social context, the values guiding it can also be traced back from the object itself. Feenberg use the concept of technical codes to point at how interests or ideology is implemented into material things (2010: 68). The technical code is "a criterion that selects between alternative feasible technical designs in terms of a social goal and realizes that goal in design." It allows us to describe how technical activity is "deeply marked by culture" (2010: 184). What this means is that we should take a closer look at the technical solutions in our lives and see what interests they really adhere to. (In a capitalist society, the technical code is the way that a technological artefact serves capitalist ideals.)

Feenberg explains that the technological devices that we use are made up of many parts which on their own are relatively neutral. They could as well be organized in other ways, to serve other purposes (2002: 77–8). But, as developed ensembles of such parts, the end product inherit certain design choices that make it "fit" within a social context.

Technologies can be designed to justify a certain social order or economic model. The ideals of freedom and individualization in contemporary digital devices can be understood not just as a mean in itself but also in the context of what Zuboff (2019) calls "surveillance capitalism". The responsiveness of these technologies is made possible by their ability to collect behavioral data from the users. They render usage into valuable information by design.

The impact of technology

Studying how technology is shaped by the social is important just because of the impact that technology has on society in general and also individual lives (MacKenzie & Wajcman 1985). The properties of technologies "influence how people are going to work, communicate, travel, consume, and so forth" (Winner 1985: 30). It is important to acknowledge that the things that surround us have moral and existential implications. To treat them as neutral and fully subordinated to their users increase the threat of failing to see how they affect us (Verbeek 2011: 2).

What this means is that technological objects are not only shaped by the social but play a part in further shaping the social. The spread of mobile phones, for example, "directly help to generate new ways of communicating and interacting" (Verbeek 2011: 4). Always having mobile communication tools readily available makes one experience the relation to space, time and other people differently; the world "shrinks" (Rosa 2013: 104). The world with the mobile phone, then, is not the same world as the one in which it was invented, which indicates that existing technology is "an important precondition for new technology" (MacKenzie & Wajcman 1985: 10). Even if inventions are socially shaped, they are created not only as a response to a social reality but also a material one. The saying "give a man a hammer and the whole world will look like a nail" captures how the world reveals itself to us through things.

The ontological powers of digital technology can also be discussed from an infrastructure perspective. The media infrastructures themselves are often so taken for granted that they risk being overlooked. Couldry & Hepp (2017) have explored the issue of agency in a time where digital communication technologies have become an increasingly important part of our social interactions. The social world is "fundamentally interwoven with media" (Couldry & Hepp

2017: 16). We not only use technology to communicate with other people, but a lot of communication is done between human and machines. They have become not just mediators of information but computerized conversation partners to which people turn to for information and help (Jones 2014). The power of media technologies/infrastructures lies in how their material properties affect how we as individuals come to make sense of the world. What we know about the world shape how we will act in it. The design of the digital infrastructures that mediate our perceptions of the world therefore have the power to, as Woolgar (1990: 59) writes, "configuring" its users by providing the allowances and constraints, shaping the conditions on which future actions are, at least in part, based.

What happens to human agency when the perceived reality against which we are to form decisions is generated through algorithms, constructed with certain interests in mind? Agency is complex when the world is heavily mediated by algorithms (Van Dijck 2009: 54). Much of this social interaction is centered around the services of a few larger companies forming what has been called a 'platform society' (Van Dijck et al 2018). When we log onto social media sites or interact with personalized smart assistants the reality that we meet is different from that of another person, because it is based on individual interests and prior actions. When we put our trust in smart technologies for helping us throughout the day, we delegate to them the power to influence our perception of reality. These services intervene in our everyday life to promote us to act in certain ways (Verbeek 2011: 123). Being accustomed to a data driven world means being reliant on algorithmically intervened information flows. For the person using the technology, it is not very evident how these algorithms are intervening in what information is being shown.

Late modern temporal troubles

Google offer technological solutions in order "give users back time". It's a mantra that runs through the Google I/O keynote. This section will look deeper into the relationship between modernity, time and ideals of productivity and self-optimization: starting with an account for these relations on a macrosocial level and then look more specific at technologies for monitoring oneself and the ideals that can be seen in these technologies and practices. Because technology can't be fully understood without taking its social dimension into considerations, one should turn to its place in daily practices (Wajcman 2015: 33).

Furthermore, Conrads (2007) has shown how social problems are increasingly being treated as individual problems in need for technological solutions. However, the faith in technology as an omnipotent, magical power to solve all problems with rational means is in itself irrational, Stivers (1999) points out. It is rational thinking that is the source of many contemporary problems. Most technological inventions, argues Stivers, are simply attempts to come to terms with earlier iterations of technology (1999: 38). How can it be that inventions that are meant to free up time, instead increase the pace of life for individuals?

Social acceleration

Rosa (2013) defines modernity as essentially characterized by the phenomenon of social acceleration, where technology, social change and the individual pace of life are mutually influencing each other. Technical acceleration refers to the speed up of communication, transportation and production of goods (2013: 63). Accelerating social change includes a general destabilization of time horizons as modernity progress, manifested by a changeover of jobs, preferences or norms (2013: 77). The pace of life is accelerating both objectively in an overall increase of actions carried out per unit of time, and subjectively, in the feeling of lacking time (2013: 79).

While these are three distinct analytical categories, they are highly entangled in practice. Technical, social and personal acceleration are reinforcing each other (Rosa 2013: 151ff). While technical acceleration saves time, it opens up more possibilities and promote a higher pace of life to cope with these. The social changes brought by technological acceleration increase time scarcity and leads to a heightened pace of life. More technical acceleration is needed in response to the feeling of lacking time.

Everything is just as far away as the time needed to get there (2013: 99). Digital technology have reduced the Internet to the size of a smartphone, always readily available. Hayles (2012) explains how this is linked with thinking on an individual level: "Perhaps most significant at this level is the feeling one has that the world is at one's fingertips. The ability to access and retrieve information on a global scale has a significant impact on how one thinks about one's place in the world" (2012: 2). As the world grows closer and the present contracts, the news

cycle covers a larger geographical area in a faster pace. It's not just the physical proximity that affects our lives (Rosa 2013: 118). The continuous flow of information enabled by the technology of an interconnected society signals the standardness of change.

Technical acceleration finds us new ways to do the same things as before faster and affects time in a phenomenological way. Knowing what is possible, ones' expectations changes. What once seemed fast, rapidly becomes slow. Old computers that were considered fast in their prime but now make a dreadful experience; traveling by train have gone from fastest to a relatively slow mode of transport (2013:82). This is further reinforced in the narrative of progress proposed by manufacturers: not only is the new and fast praised, but the current and the past also become target for reevaluation. Earlier technology becomes "that which we shall learn to dislike and change" (Riis 2015: 171).

In a paradox, faster means of communication and production don't free up time but rather the opposite. "The temporal scarcity of modernity, arise not *because* but rather *even though* enormous gains in time through acceleration have been registered in almost all areas of social life" (Rosa 2013: 67). Shouldn't people have more time at their hands when e-mails let us communicate faster than regular letters, modern transportation is faster than horse carriages and so on, asks Wajcman (2015). Instead, these time-saving inventions are brought to existence and used in a social context that does not foster a lowered pace (2015: 2). As long as a busy lifestyle is considered a status symbol, the time freed up by more time-saving inventions will enable people to increase their temporal density with more layers of activity (2015: 83). The result is that the same smart devices that are meant to alleviate us from time pressure become are the ones that are contributing to it. Wajcman's study (2015) shows how the social imperatives for a fast-paced life make people see the newly freed up time as a way of getting even more done. Technological inventions are made with this in regard and allows for a higher temporal density, turning freed up time into a chance for multitasking, that is, adding several activities on top of each other. We can clean the house and listen to audiobooks while the dishwasher frees up time by doing a task previously carried out by humans.

The increasing pace of time thus manifest itself through the growing number of things while time itself stays the same (Turkle 2011: 164), resulting in a development where the time one can spend on each activity shortens (Rosa 2013:125). Here, the social and technical expectations of the ability to be permanently reachable play an important role (2013: 306). In

conclusion, the solutions for coping with time scarcity by inventing faster means of communication and increasingly efficient technologies becomes "an essential element of its causation at the macrosocial level" (Rosa 2013:156).

Digitized activity

The reflection of late modern temporalities in self-measuring technology is highlighted by Berg (2017; 2019), who's case studies of several devices for quantifying ones' everyday activity are presented as technological means for coping with the heightened pace of late modernity. They do so by allowing the individual to outsource information gathering about oneself that can be used for diagnosing and improving the everyday life. Such practices are often aimed at providing data with a degree of truthfulness that transcends human capabilities. Self-measuring technology is often envisioned as tools for objectively revealing the world (Sharon & Zandbergen 2017).

In the pursuit of increased productivity and efficiency, computerization play an important role, both as a facilitator of information as well as for alleviating cognitive tasks from people. The increasing interest in self quantification can be partly derived from the emergence of widely available digital consumer technologies that have made it easier to facilitate such practices, using sensors and smart devices to collect, store and analyze data about oneself (Lupton 2016: 1). Devices used for self-tracking sometimes gather "heretofore inaccessible data" (Van den Ende 2015) and enable more rigorous control over one's activities. This is further facilitated by a social life that is played out increasingly in the digital domain, making it more easily captured in metrics (Lupton 2016: 39). Various digital technologies can lend themselves for outsourcing of the individuals cognitive undertakings. They provide the information necessary to act in a more optimal way.

A thorough sociological approach to self-tracking is made by Lupton (2016), who explains the practices as "complex and multifaceted" (2016: 63), combining the purposes of knowing and improving oneself. Self-tracking technologies provide externalized information gathering and analyzing of the self. They provide metricized information to act upon and also function as a motivator to do so. They are meant to provide metrics for better self-management in times where the abundance of information and high pace of the surroundings prove to be too much

information to take care of without technological help. Berg (2017) looks at *Moodmetric*, a self-tracking device that quantifies mood levels, which is being presented as an instrument for situations where users "cannot trust their own experiences". In a fast-paced world with too much possibilities to focus on, such devices promise a technological cure for ontological insecurity (Berg 2017: 4–5). They provide a "sense of comfort" with the help of datafication practices (2017: 8).

Tools for self-measuring are often talked about in terms of optimization and increased efficiency, they are "pushing us to rethink life in a data-driven manner" (Pantzar & Ruckenstein 2015). The technologies foster a more data-based relation to ones' life (Oxlund 2012: 44). Self-measuring devices allows for individuals to both "live by numbers and that they tell their stories by numbers" (2012:53), reflecting how the central role that digits and data play in rendering the world understandable. These conclusions are reflected by Van den Ende (2015) who offers a postphenomenological approach to self-tracking, suggesting that the devices encourage their users to see the world in a new way, as through the possibilities enabled by the devices.

Even if it is important to study self-tracking devices themselves and the representations thereof, it should be added that that their materiality tells us little about how individuals incorporate them in a meaningful way into their lives. A "distanced theorizing of personal analytics is not sufficient if one wants to capture affective encounters between humans and their data doubles" (Ruckenstein 2014).

Productivity as an ideal

Self-measuring devices indicate how principles regarding productivity and optimization have spread from the workplace into other aspects of everyday life (Gregg 2018). In her study of time management apps and self-help literature, Gregg (2018) points at a sort of Taylorism of everyday life, where not just paid hours but every aspect of life is subject to optimization. In the productivity paradigm, "realms such as leisure, play, culture, education, and family relationships have been gradually penetrated by rationalization logics and organizational patterns" (Bakardjieva (2017: 210). Productivity is alleviated into common sense. As

technology is made to help us cope with contemporary problems, the struggle for increased productivity and efficiency is reflected in consumer technology (2018: 84).

Productivity holds the promise of alleviating one from the workloads of everyday life. Gregg borrows the term *shore subjectivity* from Sloterdijk (2013), referring to the idea that "superior individuals are those who have the will to separate themselves from the river of life and enjoy the unimpeded view from the shore" (Gregg 2018:77). Living a good life equals to being in charge of how one's time is spent (2018: 78). Temporal sovereignty, to have control over how one spends time is a significant measure of wellbeing (Wajcman 2015: 164). In order to reach this state, apps like *Digital wellbeing* can provide an elevated perspective of ones' life, transforming daily activities into quantifiable metrics and foster ongoing evaluation and improvement of the self (2018: 90). "In those societies that come to value the individual, reason, and freedom, self-control becomes a virtue" (Stivers 1999: 205). Productivity and wellbeing go well together in contemporary western societies.

Productivity allows for an ideal that needs no higher moral impediments to function (Gregg 2018: 98). It works on the condition that whatever goal the individual or society desires, it can be carried out with a higher rate of efficiency. It is often treated as a neutral layer that can be established on top of either ideology. In a way, productivity as a paradigm means freedom because it's not limited to a specific end goal. On the other hand, it fosters an instrumental view of the world where all activity becomes reduced to its measurable qualities. "Under this new dispensation, meaning and ends appear subjective, nature and means objective, and no mediation reconciles them" (Feenberg 2010: 216). Instead of a deity above, it's sensors and datasets that sees everything. Rosa come to a similar conclusion in his analysis of social acceleration: Modernity has given rise to the perception of a "directionless movement" manifested trough continuous technological and social acceleration but without an overarching goal to strive towards, creating a "frenetic standstill" (2013: 314) that, without a defined goal, nonetheless moves towards a disastrous future (2013: 322).

However, everything does not accelerate (Rosa 2013: 80ff). There are also counter movements to this paradigm. Apps designed to help users disconnect, mobile free camps (Sutton 2017), mindfulness classes for finding ones' inner self in an otherwise fast paced and always on-world (Sharma 2014). But while these on an individual level are thought as counter measures to the "dazzling rhythm of technological development and the social changes that accompany it"

(Zizek 2001), they function in practice as means to keep the system going, "oases of deceleration" where one can recharge the batteries and then come back even stronger. Many of these are also explicitly tools for coping with a high paced environment in order to increase overall productivity (Sharma 2014).

Invisible technology

So far, we have highlighted the close relationship with material things and the social world that they find a place in. This last part of the theoretical framework will provide some approaches to the role of digital technology can be understood as it progresses from dedicated devices into an increasingly all-encompassing state of everyday life.

The term "ubiquitous computing" was introduced by computer scientist Mark Weiser in a 1991 article on the future on personal computers. To Weiser, "the most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it" (Weiser 1991, quoted in Zuboff 2019: 200).

There are two ways of making technology invisible. One is to integrate it into everyday life in a way that it feels like a natural part of it. Spigel's (1992) account of the entrance of the television into postwar American households showed how this large foreign object evoked various discourses: it threatened to "disrupt traditional patterns of family life", in other cases a "vehicle for family togetherness", whose qualities was not just in the content mediated through the screen but as an object imbued with its own meaning (1992: 9). Suddenly the whole room, furniture and practices, was ordered after the new apparatus (1992: 107ff). Makers of new technology face the challenge of turning them into unreflected parts of everyday routine. We see this when looking at the Google presentation, with its product demonstrations and carefully curated videos showing the products in everyday settings. The people on stage that explain how they face the same everyday struggles as you and I, and how these new innovations enhance their lives, by overcoming human limitations, are all attempts to do this (Gregg 2018: 87–8).

The other way is to create ubiquitous computing in a more literal sense. In that way people don't even notice that they are interacting with it. Google's former CEO Eric Schmidt have previously stated that this is the future the company is moving towards (Zuboff 2019: 199).

Google's *Digital assistant*, a mediator between user and the digital sphere, is preferably controlled by voice. It signals a departure from stationary objects to omnipresent computing interacted to via voice and sensors.

Theorizing smart technology

The ideas seen in Google's *Digital assistant* has been studied under the name Ambient intelligence. Ambient intelligence refers to a paradigm within information technology where technological aides become detached from concrete devices and becomes a part of the environment. They are intelligent in the sense that they can adapt to the user, for instance brining personalized answers. It brings the vision of people, without having to keep track of a dedicated device, can speak out the wonderings and get algorithmic assistance at any place. It makes computers ubiquitous and invisible at the same time, hiding the processes in the background. The term is often used to describe so-called smart systems that are characterized by making technology "sensitive, responsive, adaptive, transparent, ubiquitous, and intelligent" (Augusto et al 2009: 278). It's often envisioned as means to empower everyday life with sensors and ubiquitous computing (Brey 2005: 157). One variant of these smart surroundings is made possible today via so-called digital assistants, such as Google's *Digital assistant*, Amazon's *Alexa* or Apple's *Siri*. These voices are integrated in devices that need no tactile interaction but can be talked to and respond back.

However, the conveniences brought by voice assistants also raise critical questions as the computing helping users through day to day life becomes increasingly obscured and omnipresent. Ambient intelligence systems "though often designed to enhance freedom and control, has the potential to limit freedom and autonomy as well" (2005: 157). Within these systems the user takes a managerial role and delegates control to the computers instead, creating a situation where users give away control in order to gain control (2005: 160). We can now let our (digital) assistants read and send messages, control the lights, thermostats and other home appliances. Their powers are the effect of users willing to give technology access to more parts of private life.

One of the benefits of the smart assistants is that not only execute tasks but conveniently hides them away from the user, alleviating layers from a crowded schedule. "We will no longer need

to search for anything since we are perpetually monitored, with the relevant information sent to us on the basis of perceived need" (Wajcman 2015: 172). Crawford and Joler (2018) have studied the obscured infrastructure that makes its services possible. Opened up, the smart assistant only consists of a few microphones and sensors to mediate information between user and remote server halls that carry out the computation. Nothing in its material appearance "will alert the owner to the vast network that subtends and drives its interactive capacities" writes the authors.

As these technologies weave themselves into the fabric of everyday life, many scholars approach the new step in consumer technology with ethical wonderings. Rouvroy (2008) stresses that the era of ambient intelligence raises "unprecedented challenges" with regards to privacy and data protection. The adaptiveness of smart technologies to the users' needs have implications for human autonomy as these intelligent interfaces make decisions for users, and it becomes harder to see in what way they intervene. This new way of interacting with media technologies "challenge, quite radically, the classical Enlightenment notion of the sovereign subject" (2008: 43). Questions of agency become complicated when so much of our interactions are heavily mediated and altered by algorithms (Van Dijck 2009). Jones (2014: 254) add that as communication with machines become more prevalent in everyday life, it becomes more important and also more difficult to understand its consequences.

However, in addition to the benefits of technology turning invisible, enabling technological assistance without being intrusive, there are also dangers of "forgetting" about the technology that affect ones' life. It becomes harder to see the impact of technology when it's taken for granted Verbeek (2011). The invisible nature of voice controlled digital assistants brings new risks as it "enhances the influencing power of AI" (Taddeo & Floridi 2018: 752).

Experience turned into data

Smart voice assistants have been compared to "technological Trojan horses" (Zuboff 2019: 513) because of their ability to incorporate surveillance deep into everyday life without the user necessarily reflecting on it. They make their way into people's lives promising to

alleviate tasks and free up time, while their actual task is to index people's lives and create new markets for advertising and for influencing behavior (see also Vaidhyanathan 2011).

Zuboff (2015; 2019) provide an insight into the economic incentives guiding the transition to voice guided smart assistants. They embody what Zuboff calls surveillance capitalism, a logic that guides companies to turn people's actions and experiences into valuable data. She writes that "the currently institutionalizing logic of accumulation that produces hyperscale assemblages of objective and subjective data about individuals and their habitats for the purposes of knowing, controlling, and modifying behavior to produce new varieties of commodification, monetization, and control" (Zuboff 2015: 85).

These products, while used as means for enhancing productivity also open up for new forms of data collection (Zuboff 2019: 219). Convenience and data collection goes hand in hand. In order to get personalized help from smart technologies, they need to know who we are. Making more objects 'smart' means enabling new sorts of experiences as data and a more comprehensive data set of the user (2019: 233). This also means new arenas for advertising, in kitchen applies and other connected devices (2019: 259). Zuboff argues that the automation of society really is "the replacement of society with machine action dictated by economic imperatives" (2019: 221). Seen this way, loss of agency is not just a consequence of smart technology but a motivation for it.

A critical approach to datafication practices of Google is recently made by Cheney-Lippold (2017) who is critical towards the impact our datafied selves have in both online and offline situations, as the algorithms have trouble capturing the humans they are meant to reflect. People have very little control over the data doubles that companies like Google use for personalizing content. Cheney-Lippold highlight the problems with bias built into algorithms. Data doubles are never really doubles but a collection of traces, like footprints to a person. However, these data have considerate impact on our online and offline experiences are shaped.

While smart technologies are often seen as an ethical threat, Dorrestjin (2009) argues that they primarily become a problem when not designed with users' wellbeing in mind. Companies should use the knowledge of the behavior effects of technology in order "find ways to create ever more intelligent and active technical environments in which users feel nonetheless in control of their own actions and lives" with more focus on usability and ethics. As a way to

maintain the benefits made by artificial intelligence while still allowing humans to be in control, ethical frameworks that foster human wellbeing could be a solution (Taddeo & Floridi 2018).

Digital wellbeing, according to Google

The analysis is divided into four parts. The first half focuses on how Google define current problems with digital technology, and, based on their diagnosis, what they present as a solution. In the second half on the analysis I widen the scope to see how the values guiding the Digital wellbeing initiative relate to the other Google services presented in the Google I/O Keynote.

Losing control over technology

What are the problems with contemporary digital technology use? With *Digital wellbeing*, Google have set out to define and solve the problems with contemporary digital technology. This part examines how Google conceptualize issues related to use of digital technologies such as smartphones and online services. Google have the privilege to define what constitute a threat to healthy human–technology relations. How the problem is conceptualized will in turn shape the solution.

Excessive use

Mobile phones and other digital devices can pose a threat to individual autonomy. This is the main problem brought forward by Google when presenting the *Digital wellbeing* initiative at the Google I/O. They demand our attention and we risk losing control over the technology in our lives. Lack of control over the technology manifest itself in several ways, one of which is excessive use.

The introduction of *Digital wellbeing* starts with a personal story from Sameer Samat, VP of product management at Google. He is one of the developers behind the initiative and explains that his excessive phone use became a problem:

> On a recent family vacation my partner asked if she could see my phone right after we got to the hotel room. She took it from me, walked over to the hotel safe, locked it inside, and turned and looked me right into the eyes and said: you get this back in seven days, when we leave. I was shocked. I was kind of angry. But after a few hours something pretty cool

happened. Without all the distractions from my phone I was actually able to disconnect, be fully present. And I ended up having a wonderful family vacation.

The anecdote told by Samat initially seems counterproductive to a company like Google, whose business revolves around digital devices and services. With most of the company's services being free to use and widely available, Google generate profit out of the time and information that people invest in their services, providing user data that can be used for targeted advertising. In terms of revenue generation, Google's core business is not providing tools for searching the web but selling users "attention to advertisers" (Vaidhyanathan 2012: 26). Simply put, the more time users spend with Google's services, the more revenue the company generate. Yet here Samat stands on stage, telling the world that locking our smart devices into safes might help us feel better. The smartphone, linking humans with Google's services, is described as a threat to a meaningful vacation.

The smartphone is undoubtedly a useful device for productivity, but can also have the opposing effect, consuming people's precious time on less useful things, says Google. Smartphones and tablets here echo problems often associated with watching tv, a technology device they to some extent have replaced (Rosa 2013: 142). Similar to watching tv, these devices can function as temporal gap fillers. They require little preparation or follow-up, providing bite-sized entertainment whenever needed (2013: 138). Scrolling through endless social media feeds might feel rewarding in the moment, but afterwards it can leave users with the feeling of having wasted their time. Samat further explains that many Google users experience the same problems as him:

> People tell us a lot of the time they spend on their phone is really useful. But some of it they wish they had spent on other things. In fact, we found over 70 % of people want more help striking this balance. So, we've been working hard to add key capabilities right into Android to help people find the balance with technology that they're looking for.

It's not just entertainment that risks consuming too much time. Smartphones have helped blurring the distinction between work and leisure time (Ragsdale & Hoover 2015). Their ability to make us stay connected at any time makes it easy to go in and check the work email outside of office hours. On stage, Google's Sameer Samat shows a diagram of his email activity over

the last weekend: five minutes here, six minutes there. Each separate session seems insignificant, but the total leaves him with a bad feeling.

> …when I saw this, it did make me wonder whether I should have been on my email all weekend but that's kind of the point of the dashboard.

Furthermore, the ease of connecting can turn into a problem when people can't resist their devices at the wrong time:

> We heard from people that they often check their phone right before going to bed. And before you know it, an hour or two have slipped by, and honestly, it happens to me at least once a week

As can be seen in the quotes above, smartphones and constant connectivity is presented as ambivalent: One the one hand it fosters individual autonomy. Smartphones are tools for liberation, increasing the individual's ability to plan life, without being tethered to a specific place or office hours. It enables instantaneous access to information. But the same things also pose a threat to wellbeing. Without discipline the technology might take control over its users. When Google talk about the pervasiveness of smartphones, all of the examples revolve around people using their devices and regret it afterwards.

Today, many of the most popular mobile apps are designed to keep its users online for as long as possible (Karppi 2018: 5). In a market model where many apps are free to install, but generate revenue out of people's time spent using the apps, business is flourishing when users forget how much time they have spent inside the app. This create a situation where the interests of the individuals not always are the same as the companies producing applications (Hayles 2012: 18).

In the battle for users' attention, Google want to place themselves on the users' side. *Digital wellbeing* provides tools for giving users control over how they spend their time on their digital devices. Without the technological tools provided by the *Digital wellbeing app*, Google reminds us how easy it is to lose track of time and become consumed by technology.

Wellbeing in this sense is achieved by cutting down on unnecessary device use. Many of the functions built into *Digital wellbeing* are encouraging its users to "schedule custom breathers as often as you want, pausing what you're currently watching and encouraging you to step away" (Google 2018).

The solution mainly focuses on giving users a better sense of how much time they spend doing different activities on the phone. In providing statistics for one's digital behavior, time that previously have 'disappeared' now becomes tangible, transformed into clear metrics, presented as interactive diagrams. Without forcing its users to either use the functions or take action based on the results, the wellbeing app can be interpreted as a mainly mnemonic function, aimed to gather information that otherwise would have been forgotten. This is a common use for self-measuring devices (Lupton 2016). The dashboard provides documentary evidence for persuading users to switch off. Google want users to take back control over their technology. This means that individuals can be able to use it on their own terms.

Too much information

When Google talk about the role of their digital services and devices in people's lives, ideas about efficiency, time saving and means for liberating individuals in their everyday life are always prominent. Their services are engineered to "give users back time". "Great technology should improve life, not distract from it" (Google, 2018) says the headline on the *Digital wellbeing* website.

However, this vision has not fully come true. The actual place of smart phones in people's lives is more ambivalent. Filled with so much potential, the smartphone can cause trouble by information overflow, tells Google. The same device that is made to enable productivity suddenly becomes a hinder to it. Google's Sameer Samat explains that

> People have also told us that they struggle to be fully present for the dinner that they're at, or the meeting they're attending because the notifications they get at their device can be distracting and too tempting to resist. And come on, we've all been there.

The same capabilities that make smartphones useful also become their problem when exaggerated. This unintended mishap of technologies designed for speed can be understood as what Rosa calls "slowdown as dysfunctional side effect" of acceleration (2013: 84). Rosa uses the example of traffic jams which becomes a useful metaphor in this case. Every single car is undoubtedly faster than previous means of transportation, and thus has the potential for accelerating traveling. Yet with too many cars in the same area, together they can cause a slowdown. With mobile phones, each new app can increase productivity, but taken together, all instantaneous possibilities may lead to inefficiency. Google mention that too many incoming notifications can turn individual pieces of useful information into a collective flow of disturbances. These slowdowns are common consequences of a general acceleration in society.

More efficient technologies don't necessarily lead to people having more free time. Paradoxically, it's often the contrary. This has been the case since long before Google, as Cowan (1983) show in her historical analysis of the impact of new technologies on American households. The transition to stoves in American households indeed made cooking more efficient compared to the hearths it replaced, but it also facilitated more advanced cooking. With more competent technologies for cooking ready at hand, households also got the ability to cook several dishes simultaneously through multitasking, which may have led to more work rather than less (1983: 61–2). Although each meal took less time to prepare, stoves "probably increased the amount of time that women spent" in the kitchen. The stove, like the digital devices Google seek to tame, did not force an increased pace or amount of work, but its constitution paved the way for social changes in the household that ended up doing so.

Similarly, new digital technologies themselves don't force a higher tempo of life. Wajcman notes that "the same technologies that promote the extension of working time can also increase autonomy and control over when and where work tasks are accomplished" (2015: 159). But as the Google CEO Sundar Pichai points out during the keynote, there is an "increasing social pressure to respond to anything your get right away. People are anxious to stay up to date with all the information out there." How innovations are used is not invented in the lab but in the real-life context in which they are used.

Here, another conflict related to the ideals of autonomy becomes evident. The possibility to communicate outwards at all time comes with the cost of always being in reach to others. The

incoming notifications and the social pressure of answering directly makes users feel like they are not in control of their devices. They have to obey their devices.

This problem is addressed in the *Digital wellbeing* by a smartphone function called *Wind Down*, a way to remove disturbances by limiting the communicative functions of the device. Wind down mode, preferably turned on when the user is done for the day, turns the screen into greyscale and blocks incoming notifications. It is "far less stimulating for the brain and can help you put the phone down" says Sameer Samat. To help users control their devices, Google want to make them less appealing. "It's such a simple idea, but I found it's amazing how quickly I put my phone away when all my apps go back to the days before color TV". The other *Digital wellbeing* functions, which will be returned to in the next chapter, include timers to limit use of certain applications.

Digital wellbeing essentially consists of a series of technological invention to give people a better experience of other technological inventions. The initiative shows a great belief in technology as a tool of improving human life. The fact that a solution to the problems can be sent out via software updates highlight the malleability and diversity of contemporary digital devices. While smartphones do have a certain materiality that shape how they can be used, they are much less determined by it than pre-digital media. The digital structure allows devices to simulate and comprise any other media form such as tv, radio and phone, constituting what has been called the end of media (Kittler 1999: 1). The malleability and mobility of smartphones turn them into substitutes for a wide range of media.

So, when Google want to improve the experience for users they don't have to produce new phones, but instead refine the already existing ones. This approach follows the argument that smartphones aren't good or bad for wellbeing in themselves, but that their experience can be improved (Brey 2017: 9). The same devices can then be both the threat to a good life and the proposed facilitator for it (Verbeek 2011: 120). The next part of the analysis will look closer at how Google think we should interact with our devices.

Take back control

The *Digital wellbeing* application is Google's way of materializing the values guiding the *Digital wellbeing* initiative. The following section examines how notions of rationalization and self-improvement with the help of metrics guide the company's ideas about wellbeing. *Digital wellbeing* expands its scope from designing technology suited for humans, into encouraging humans to be better adapted to the technology surrounding them.

Optimization of the self

Are the problems associated with technology use exist because of the way the technology devices are designed or caused by how they are used? Scholars arguing for the social shaping of technology often point out that the media technologies themselves can only suggest how to be used through materializing certain affordances, in response to technology deterministic approaches that place more agency in the material (Gillespie et al 2014; Feenberg 2002; 2010). Study of the technologies themselves is insufficient to understand their place in the lives of their users. From the perspective of technology producers, this illuminates the problems designing the perfect technological tools as they require a fully adapted human counterpart to function as intended.

Google acknowledge that there are certain problems with contemporary consumer technology, but that digital technologies also would be less of a problem if humans were better suited to them. Problems appear where Google's vision of the rational technological world becomes hindered by the irrational behavior of individuals. They are not behaving with sufficient self-discipline, easily falling into technological misuse and irrational behavior. When Samat explain that "over 70 % of people want more help" it also signals that some people have the capability to handle their devices. With the right discipline it is possible to become victorious in late modern society, empowered and not burdened by the technological devices (Gregg 2018: 89). The *Digital wellbeing* tools suggest that it could be possible to live with pervasive technologies if human willpower was strong enough. "We've all been there", says Sameer Samat on stage.

The focus on making individuals better adapted to the technological world can also be seen as a part of a larger process in which problems are increasingly being treated as individual

problems that technology can fix instead of symptoms of wider social struggles (Conrad 2007: 153). Excessive technology use is presented in a similar way as alcoholism, which sees over use as the problem rather than use itself. Phone addiction also have the individual causing problems for both itself and its proximity. Like an addict, Sameer Samat fail to acknowledge his excessive use until his wife intervene and locks the phone away from him. To reach digital wellbeing, Google prescribe a healthy amount of technology use: the smartphone is a fantastic device as long as users can keep a healthy relationship to it. With this in mind, *Digital wellbeing* is not only about designing better technology for humans, but to help humans to optimize their relationship with said technologies.

The Digital wellbeing app

The *Digital wellbeing* app acts as a tool for optimization of smartphone use. It's designed to help its users live with the digital technologies that always call for our attention and time. Google says that they have "been working hard to add key capabilities right into Android to help people find the balance with technology they're looking for". Balance is here mainly associated with time management, as becomes evident when looking at the functions brought by the app.

The app can be compared to a personal control center. It measures all of the users' smartphone activity and displays it in interactive metrics. It is always running in the background, collecting information about how much time has been spent in different apps, how many times the phone has been unlocked and how many notifications one has received. It's designed to silently collect data and help users with the things they would miss out on otherwise.

However, achieving digital wellbeing doesn't only mean collecting information about ones use, but also implies to act on the metrics. The metrics can help users improve their behavior. The app encourages users to set time limits for certain apps or to suggest taking breaks when having watched YouTube for too long. These are what Feenberg (2002: 74ff) refers to as technical codes, materializations of ideas built into the technology. The *Digital wellbeing* turns everyday life into an activity that should be monitored and improved.

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If users only have sufficient information about their screen use, they can make better decisions. Like a fitness tracker measuring training activity, the *Digital wellbeing* app turn behavior into metrics that can be measured against a set of goals. It's an approach that echoes the prominent explanatory role numbers have in contemporary western societies (Lupton 2016: 96). *Digital wellbeing's* proposed strength is that it makes use visible. Based on the numbers, users can get a sense of fulfilment or a clear message that they fail with their goals. Google doesn't force its users to take measures, they are free to define what is reasonable use. However, they encourage users to voluntarily engage in optimizing their own lives using self-surveillance techniques (Lupton 2016: 50).

Taylorism of the everyday life

The practices used for improving efficiency by Google follow the same patterns as those described by Lupton (2016) in the productivity-monitoring devices and software guiding worker efficiency in the workplace. Services for monitoring are useful "as employers seek to identify the habits of staff members in the interest of collecting data that will assist in maximizing worker efficiency or in reducing costs" (2016: 25). The main difference, of course, is that unlike in the workplace, this measuring is made voluntarily. *Digital wellbeing* thus follows Gregg's (2018) argument that the strive for productivity in the workplace have become a norm guiding other parts of life. Productivity and efficiency are here an end goal in itself. Google never define what should be done with one's time, but once the user has made the decision, Google's role is to speed up the process. Their mission to give users back time can be applied to anything.

Spending too much time on devices is bad because it could have been allocated in a more optimal way. The way *Digital wellbeing* is designed and presented alludes to a sort of Taylorism of the everyday life (Gregg 2018). By breaking down device use into smaller components, the user will be able to analyze it from above. The information should then be used to identify redundant aspects that can be optimized in the same way as scientific management sought to streamline workplace practices. By turning device use to metrics, the app activity is separated from the person that is producing it. There are no traces of the person in the numbers. Instead, the app only captures statistics of actions carried out over a certain time span.

With Google's revenue mainly coming from matching advertisers with suitable users through mapping of user behavior, their "core business is consumer profiling" argues Vaidhyanathan (2011: 9). The more information Google have about its users, the better basis it has for making money. However, that presuppose the user data generated is representative of the person its gathered from. And that is not always the case. As the *Digital wellbeing* initiative states, one major problem with contemporary digital technology is that people lose agency over their device use. If people don't spend their time online in accordance with their own desires, the data they produce becomes less useful to Google, which makes it harder to match them with relevant ads. No matter how small pieces the *Digital wellbeing* app break down device use into, it fails to recognize whether the user found the time spent was meaningful to the person or just another example of a device hard to put away. Helping users take back control over their technology can therefore be valuable not just for the users themselves but also for Google.

Furthermore, the metrics used in the app only cover time spent using the device's screen, which means that voice interaction with Google's *Digital assistant*, through other devices such as smart speakers is excluded from the statistics. If digital wellbeing is defined as limiting time spent with smart phones and screens, the more one switch over to Google's new technologies, the better it looks according to the app.

The *Digital wellbeing* app is more about techniques for handling current technology on a personal level than a way to transform it. It's a set of tools for living with digital technologies, keeping up efficiency and resisting the temptations of wasting ones' time.

A parallel can be drawn between *Digital wellbeing* and how modern mindfulness techniques inspired by eastern religions serve a purpose in maintaining the high paced life in the west rather than being a resistance against it. Inspired by the old Marxist notion of religion as an 'opium of the people', Zizek (2001) argues that mindfulness/lunch break power yoga serves as a treatment against the symptoms, a tool for the individual for enduring without touching the cause, an "imaginary supplement to terrestrial misery". Western Buddhism, as Zizek describes it, is a rationally grounded form of coping with accelerating technological and social change. It fails in its new context because of "the very *form* of their endeavor", seeing mindfulness as a tool guided by the notion of progress, the very opposite of its eastern roots, reducing it to a power nap from technology for returning recharged into the same society one needs a break from. Sharma (2013: 82) retells the story of a lunch yoga instructor telling the class that they can

"take this yoga back to your desk". Like yoga instructors, the *Digital wellbeing* app is a 'speed therapist' (2013: 89), a rationalization of breaks to raise overall efficiency. In the optimization of the everyday life, "leisure too has been reduced to a rational technique" (Stivers 1999: 202).

Sharma (2013) adds that these voluntarily slowdowns in modern society of slow food and yoga classes for finding ones' inner self, work on the condition that the high pace of society is maintained outside of these oases. They become paradoxes of slowdown in the sense that they further make possible the high pace as a norm. With the *Digital wellbeing* app, a tool is provided for continue living with something that might threaten wellbeing. Users can take short breaks from their smart devices serve as a way to disconnect for a short time and return with their own batteries charged (Rosa 2013: 87).

Quality and quantity

The metrics provided by *Digital wellbeing* app should not just be used to cut down time using the phone, but also to manage how time is spent on the device. With so many possibilities, users can be more effective to make their technological engagement more meaningful. Sameer Samat explains:

> Now, when you are engaging is one part of understanding. But what you engage with in apps is equally important. It's like watching TV: catching up on your favorite shows at the end of a long day can feel pretty good but watching an infomercial might leave you wondering why you didn't do something else instead.

There is obviously time for people to spend on their devices. The problem is that they spend it wrong. The evolution of life and work in west has led to a general increase in unscheduled time that can be allocated at the desire of the individual. But having time at disposal gives a sense of pressure to invest it wisely. It's not just the quantity of time but the quality that is main source of contemporary sense of harriedness (Wajcman 2015: 4). Rosa (2013) notes that the amount of possibilities for an individual to do is increasing much faster than the time available. The pace of life is much a matter of perception, defined not only from the amount of time one has but through expectations of how time should be allocated (2013: 135). This help explains the troubles preceding *Digital wellbeing*. Many who feel distracted by their devices obviously have

time (quantity). The problem is that it's consumed by social media feeds, messaging, games and other tasks that doesn't feel meaningful afterwards.

However, meaning is absent in the material that should be used for taking action. The *Digital wellbeing* app handles interaction as a purely quantifiable matter. It does not acknowledge how spending time with one's phone can be either meaningful or not depending on what is done.

In this search for more meaningful engagement, the emphasis is put on *more*. Outside of the part of the keynote reserved for *Digital wellbeing*, the time given back by Google is not so much presented as a way to relax, but to get even more things done. The advances in smart technology "makes it so easy to enjoy my favorite shows while multitasking around the house" says a Google employee demonstrating the company's new smart screens during the same keynote. The general idea is that technological engagement can be made even more efficient, by removing all redundant elements of interaction, and make people able to fit even more meaningful content in the same amount of time. The idea of multitasking is to not just do one meaningful thing at a time but several, and that Google can help us fit even more things into our tight schedules. Wajcman (2015: 104) use the concept 'temporal density' to explain people having several processes going on at the same time. *Digital wellbeing* encourages users to maximize their amount meaningful engagement. As long as Google's solutions are thought of as a way of getting even more done in combination with the self-optimization values embedded in the *Digital wellbeing* app, the conditions that have made *Digital wellbeing* needed remain in Google's vision of how human–technology relations should be.

Ultimately, *Digital wellbeing* according to Google is not so much about using technology less as it is about using it in a more efficient way. Using digital devices is not a problem in itself as long as it is done the right way. To Google, smart technology should give users time, not take it away.

Make Google do it

Google present their computational services as means of liberation from a contemporary world filled with too much information and possibilities, but not enough time. With the slogan 'Make

Google do it', Google propose that AI can overtake tasks that previously have been carried out by humans, thus increase individual efficiency by freeing them from menial chores. By handing over cognitive tasks to Google, the individual gain control over time but at the cost of control over and insight to the processes. The values guiding *Digital wellbeing* (control over technology, limit use) become at odds with the rest of Google's services, as they encourage further integration of digital technology into the everyday life.

Technical assistance

Technology is not just a threat to wellbeing but also the prescription for it. "The great thing about technology," says Google's CEO Sundar Pichai, "is that it's constantly evolving". For every year, the list of things that computers can help with is growing. The event is a demonstration of "all the progress since last year's I/O".

To Google, there are seemingly no limits to what can be done using computation. For instance, one problem brought forward in the *Digital wellbeing* presentation is that smartphones pose a threat to healthy sleep habits. Even here, Google's idea is that people shouldn't avoid technology to sleep better. "Getting a good night's sleep is critical and technology should help you with this, not prevent it from happening" says Sameer Samat. The problems associated with smart technology are not because of technological integration as such, but current technology being insufficient. What is needed, then, is further development and integration towards a future where these problems are solved technologically.

Initially, there seem to be an antagonism between on the one hand *Digital wellbeing* with its focus of reducing time spent on digital devices, and on the other hand the rest of Google's products, which promote digital technology as a means for improvement of every area of life. Google's news app, *News*, for instance, is marketed with the complete opposite of reducing time with technology: the more you use the application, the better it gets, thanks to the machine learning algorithms learning about ones' interests and adjust the news displayed. The common denominator across these services is to increase efficiency in order to save time. Just like one should cut down on unnecessary screen time to promote wellbeing, Google wants us to stop wasting precious time doing menial tasks.

"Make Google do it"

There are several reasons to "Make Google do it", as their slogan reads. The first one is that Google can alleviate tasks from us, either because people don't want to do it, or because Google can do it better.

Let's start with tasks that we don't want to do. In the pursuit of better time management, there is a clear connection to *Digital wellbeing* here. Why should we do things that doesn't feel meaningful to us, when computers and machines can do them instead, asks Google. There are many tasks that can be alleviated from a hectic schedule: Finding information (Search), automatically editing photos (Photos), navigating (Maps), making phone calls (Duplex), or driving (Waymo) to name a few. As Sundar Pichai explains:

> A common theme across all this is that we are working hard to give users back time. We've always been obsessed about that at Google. Search is obsessed about getting users the answers quickly and giving them what they want.

Google's e-mail client *Gmail* has also seen improvements in order to save time for users. It can now use artificial intelligence to help composing messages, says Sundar Pichai, while demonstrating it on stage. "It takes care of mundane things like addresses so that you don't need to worry about it, you can actually focus on what you want to type" he says while the smartphone application helps writing an email about dinner, based on the headline "Taco Tuesday". "I've been sending a lot more emails, not sure what the company thinks about it" he adds jokingly.

Many of the tasks that Google wants us to leave to the computers are far from complicated to do in person, writing an e-mail is a good example of that. But that's part of the reason we should not spend time doing them. They consume time but give little back and prevent us from doing what we really want to do. In the presentation of *Duplex*, Google's AI service to let computers do automated phone calls, the examples of uses include situations far more boring than complex, at least for humans:

A big part of getting things done is making a phone call. You may want to get an oil change scheduled, maybe call a plumber in the middle of the week, or even schedule a haircut appointment. You know, we are working hard to get users through these moments

The mundanity of tasks is a recurring theme during the presentation, and it highlights a quality that separate computers from humans. Computers don't complain about their assignments and don't get tired or lose focus over time.

The solution is to automate said tasks. Automation refer to the "execution by a machine agent (usually a computer) of a function that was previously carried out by a human" (Parasuraman & Riley 1997: 231). Automation is often applied to tasks that are considered unwanted, time-consuming or include intensive labor. Action that have previously been considered typically human, tend to become perceived as machine-like once they are able to automate, even in the situations when carried out by a human (Turkle 2011). We can see this in how Google market their services. Things that have been commonly taken care of by people until now are met with the question: why should we do this when computers can do it instead?

Another reason to let computers take care of tasks is because they can do them better than us. While computers lack the ability to handle qualitative concepts, such as those regarding moral and meaning or contextual thinking, it has the ability to handle larger quantities of information than any human could ever imagine (Stivers 1999: 6). Google start their presentation by talking about the progress made by their AI systems in medicine, where computers can process large quantities of patient information, "more than any single doctor could analyze", to help make diagnoses.

When computers take over tasks it not only provides faster execution speeds but also benefit from decreasing the risk of human error in situations where they are prone to make mistakes caused by stress and/or inexperience (Parasuraman & Riley 1997: 235). To Google, humans are great at deciding what should be done, but often would benefit from letting the computer carry out the task. This relates to the usual role of humans in fully automated systems, which often "involve human operators in a supervisory or monitoring role" (1997: 232). In their managerial role, Google users should not do the work but supervise it.

One example of where computers should replace humans is driving cars. *Waymo*, Google's company for self-driving cars, cite security concerns as one of the main reasons for replacing humans with automated vehicles. They are not quite there yet, but every step on the way is "moving us closer to a future where roads are safer, easier, and more accessible for everyone" as we're told on stage. With self-driving cars then, the element of risk caused by humans could be removed while still providing a means for transportation.

Self-driving cars also progress in a way that humans can't. Since all cars share a common software, every mile driven will improve the whole car fleet. In addition to improving Waymo's cars in real world settings, the cars are being trained in simulations. "In this virtual world, we're driving the equivalent of 25 000 cars all day, every day", adding up to a total of over five billion miles.

The idea of self-driving cars fit well into Google's narrative of time optimization and eliminating tiresome tasks. Old fashioned driving shares the same problem as smartphones in that it occupies the drivers' hands and eyes. Turkle (2012: 171) writes about drivers feeling a "need to connect" and the problems that arise when they hear the sounds of incoming messages while on the road. It's hard to stay connected or be productive when driving. With Waymo taking care of the driving, its passengers don't have to take a break from when moving from one place to another: it's public transport but made to support individualism.

Maybe using *Waymo* is more like a taxi service than a replacement for one's own car. Taxi drivers, as Sharma (2013: 62ff) have shown, often treated/used by customers as if they were technological assets. Their role is to submit to people with "temporal demands" (2013: 63) to enable them to keep up a high pace. Drivers' days often consist of wait times, being in standby, ready to serve those who don't have time to wait. It's a business that shows the relationship between time and power; to have others investing their time in making one's day more efficient.

Google want it to be technology, instead of other people, that enables us to keep our pace throughout the day. Computers not only process information faster than humans, they also don't mind being on standby. waiting to serve us. The taxi drivers, however, whose jobs could be at risk in a future inhabited by self-driving cars, are not mentioned at all by Google.

Reveal and obscure

Google create a world of too much information and then produce services to help people navigate through it. Sundar Pichai explains Google's core mission as to "make information more useful, accessible and beneficial to society". One of the problems that was brought up with *Digital wellbeing* is that there is too much information and possibilities on the Internet. How can we know what's important when it's impossible for humans to scan through all information? The updates presented to *News* and *Maps* address these issues by trying to make the web experience more efficient, filtering out redundant information and give users an algorithmically curated version. Knowledge is not the gathering but discarding of information (Peters 2016: 318). Today, news sources are expanded from established newspapers and officials, to tweets and blog posts, making everyone a theoretical contributor to the news flow. With so many versions of stories available, which ones are right? Seeing the whole world as a newsroom, Google is volunteering for the editorial role.

As Google's head of *News* tells us, there is simply too much information available online for humans to navigate through it all. The benefits of letting Google's AI curate the newsfeed for us is contrasted against human limitations. Unlike humans, *News* can "bring together everything". It aims to give users the full story "effortless", so that users "don't have to hunt for answers". Google's AI continuously scans the web for "the millions of articles, videos, podcasts, and comments being published every minute, and assembles the key things you need to know". In the name of convenience, users don't have to tell Google their interests because the app already knows what you like based on previous internet activities. User profiles are generated and maintained invisibly in the background as web activity is processed automatically (Couldry & Hepp 2017: 126). Google tells us that "it works right out of the box. And because we've applied techniques like reinforcement learning throughout the app, the more I use it, the better it gets". It's a selling point that doesn't go too well with their plan to help us cut down on device use.

News is presented not just as a convenience but a necessity in a time of information abundance. Media platforms like *News* have the ability to reshape the digital environment (Van Dijck 2018: 8ff) by turning large amounts of information from threatening into utility (Peters 2016). Instead of having to deal with all information out there, they sort out what's important. Google bring order to what they call a "deluge of information" through algorithmic filtering. It is not

for humans to dive into this torrent unequipped, argues Google, offering a safer and more efficient way of news reading, gathering information from all over the web and presenting it in the familiar form of a uniform graphical user interface. This sort of algorithmic selection of content taking over from humans is common across web platforms (Van Dijck 2018: 63). In doing so, services like *News* are co-shaping the ontological dimension of everyday life (Couldry & Hepp 2017: 126). They gain control to curate what information is provided to users, the information out of which the social is constructed (2017: 213): what information is relevant, and which should be hidden away?

Like *News*, *Google Maps* makes a convincing argument for itself by mere existence. *Maps* reveals how much there is to be known, showing that "the world is filled with amazing experiences" as Google's Jen Fitzpatrick says on stage. The digital map covers "hundreds of millions of businesses" and is getting increasingly detailed with the improvements in computation. It aims to help people "explore and experience more of what the world has to offer". And that is a lot, more than users can keep up with without its help.

With so much information available in one application, *Maps* has too much going on for its human users to be able to keep up with everything. It can create a sense of information overload. Fitzpatrick acknowledges how many restaurants that might be near, and how overwhelming it can be to choose the right one. The new updates to *Maps* will take use of machine learning to filter all possibilities to give the most relevant information for the individual, "to tell you what you need to know about the neighborhood you care about".

Maps now contain technological improvements to help users through the problems that previous versions of *Maps* have brought up. All of its information cannot be indexed by human brains alone: It creates the need for curation made by computers, allowing users to gain new experiences without the dangers of making the wrong decisions. Of course, users can stick to their familiar places, but with so many possibilities revealed by *Maps*, why not make use of algorithmic guidance: "This is super useful, because, with zero work, *Maps* is giving me ideas to kick me out of my rut and inspire me to try something new" tells Fitzpatrick.

As can be seen, both *News* and *Maps* are presented as ways to navigate oneself through a life that contains so much information that external computation is needed to keep track of it all. To "get the full picture" needs algorithmic intervention. This corresponds with Rosa's (2013)

argument that social and individual life is changing with new technological inventions. *News* and *Maps* aren't made to just make our current lifestyles easier but to enable an even wider intake of information into our daily routine. To do that, they take care of filtering and present the users with a curated view of the real world: selected news stories and restaurants can be both a convenience and a way of influencing the user to take certain decisions.

Adapting to new possibilities enabled by this computing makes it hard to go back. Couldry and Hepp (2017: 212) explain their worries when we tie ourselves on a societal level to "an ever more complex infrastructure of interdependent communication". It creates a world where companies like Google have the power shape the ontological dimension of everyday life (2017: 126), and since life is ordered around the availability of these services they become hard to renegotiate. Today the social life and media communication technologies are built around each other, making them interdependent (2017: 215). A quote presenting *Maps* show how it allows for a more lifestyle increasingly dependent on Google:

> Today our users are not only asking for the fastest route to a place. They also want to know what's happening around them, what the new places to try are, and what locals love in their neighborhood.

The scenario presented by Google is one where users are in need of smart solutions in *Maps* to sort through the innumerable possibilities surrounding them, because of all the possibilities that have been made visible by *Maps*. It's a lifestyle that urges smarter technologies (Rosa 2013: 174ff).

Users don't know the inner workings of the algorithms that curate what information should be visible and what should be hidden. This should be understood as one of the benefits. Google does it so that users don't have to think about it. However, some transparency is provided in both *News* and *Maps*. They provide information about what previous actions have influenced the recommendations that appear in the apps. Based on the "Restaurants I've rated, cuisines I've liked, and placed I've been to…you will see reasons that it's recommended just for you".

The Digital Assistant: ubiquitous and invisible

In a world overcrowded with information, the uncluttered existence is appealing. To mediate human and computer, Google have created the *Digital Assistant*. It's the way Google thinks we should connect with their services, preferably by voice. The Assistant is a software interface for handling user queries. It is summoned from devices by saying "Hey Google," followed by a question or demand. People can then delegate cognitive tasks such as searching for information, read or send messages, scheduling, turn on the light or thermostat or tell a joke. The *Assistant* gets lot of space in Google's presentation, as its meant to be the service tying all other Google services together.

The *Digital Assistant* is made to "help you get more done and get time back", and to "make your day easier". The way of doing so is to connect the assistant with other devices thus making them smarter. At the time of the presentation, the *Digital assistant* is connected to half a billion devices around the world. It exists not only in smartphones and Google's own smart devices, but in cars and 5 000 different home devices, "from dishwashers to doorbells". Still, the journey of the Digital assistant is just getting started, assures Google.

The Assistant gives the experience of technology being fully on the individual's terms. It hides in the cloud, always ready to help, yet never intrusive. "Our vision for the perfect assistant is that it's naturally conversational. It's there when you need it, so that you can get things done in the real world" declares Google's Scott Huffman on stage. The *Digital assistant* is made even more tempting by playing on ideas of a real-world servant, an exclusivity for the wealthy, loaded with connotations of personal prosperity. (Zuboff 2019: 257). Like a butler, the *Assistant* will effectively carry out tasks without questioning, taking care of work and conveniently hiding the process. Because it's always there yet can't be seen, the Assistant exemplifies how technology is getting increasingly "ubiquitous and invisible" (Taddeo & Floredi 2018).

Although the *Assistant* can be contacted through every phone and smart speaker, the actual computing takes place in remote data centers. The workload is obscured from the user, who is presented with the result without getting insight into the process. The suggested advantage is not only to optimize life by carrying out tasks but also to effectively hide it and add to the impression of a paceful life. It's a way to reach *shore subjectivity* as described by Sloterdijk

(2013), the ability to escape the rushing river of information of everyday life and watch the process from aside.

However, while freeing time for people, the examples of how Google services can be used to save time does not promote a slowdown of the pace of life but acts as a technological tool to increase the tempo. In the video ads exemplifying everyday interaction with the *Digital assistant* show people using it while being off their phones. Thanks to the assistant, one can continue the mail conversation while showering or driving. It allows and encourage increased temporal density by allowing another layer of activity while already occupied (Wajcman 2015). When we "Make Google do it", everything that leads up to the result is obscured behind the user interface (Crawford & Joler). The result is convenience and cleanliness for the price of lacking control over the process.

There is no way to access the real computers powering the *Digital assistant*. Open up one of Google's own smart speakers in search for the *Assistant* is like disassembling a telephone in search for the person in the other end. Inside are sensors and microphones, mediators between every home and the Google servers: "nothing will alert the owner to the vast network that subtends and drives its interactive capacities" (Crawford & Joler 2018).

Talking about *Digital wellbeing*, Google emphasize the need for having control over the technologies in our lives. At the same time, the shift towards outsourcing of cognitive tasks using the Digital assistant leave the user with little information about how the results came to be. Making Google do it foster an illusion of having control: the user gets to decide what should be done but not how.

Don't mind the technology

To the average consumer, Google's products are meant to just work. Not much is shown about how they actually work, but this is also part of the argument for making Google do it: not only can they overtake unwanted tasks, but also conveniently hide them from view. All the workload enabling a digital assistant in the home, from computation to natural resources building the machines to human work is hidden far away, so that the user doesn't have to see it (Crawford & Joler 2018). The *Digital Assistant*, like human assistants before it, maintain a professional

and effortless demeanor while obscuring the workload enabling its convenient services. "While consumers become accustomed to a small hardware device in their living rooms, or a phone app, or semi-autonomous car, the real work is being done within machine learning systems that are generally remote from the user and utterly invisible to her" explains Crawford & Joler (2018).

People utilizing technical features without fully knowing how they work is nothing new. Since industrialization, humans have been accustomed to "tools that can be neither manufactured nor understood by the workers who use them" (Cowan 1983: 7). Take for example Weber's (1977: 20) definition of the disenchantment process in modernity, wherein magic and superstition lost its relevance as explanatory model in favor of rational interpretation. Weber argued that people have no problem traveling by train unknowingly of how the vehicle actually functions. Yet they believe that it can be rationally explained if one needed to gain that understanding. The convenience of the end product, whether it's public transportation or artificial intelligence services, can be fully appreciated without having insight in the underlying processes that make them possible. In a world dreamt up by Google, their technologies are used by everyone yet deeply understood by very few.

Lack of knowledge about the technologies one has implemented in life risks increasing dependency. "The tools are not always at our beck and call. The less we know about them, the more likely it is that they will command us, rather than the other way around" writes Cowan (1983: 10) which sound even more relevant in a time of algorithmic interdependency.

Digital wellbeing is not about leaving technology or disconnecting. Contrary, Google proposes deeper integration with digital technology in everyday life. This is done by altering the ways in which human–technology is imagined. To Google, it is the perceived gap between the real and the artificial that is the problem. People spend a lot of time with digital technologies, but when they turn away from their devices it feels like the time has been wasted. For a company relying on users investing time in their services, this experience of otherness in technology is a hinder. This explains Google's repeated mention of how technology should be useful "in the real world". It's not the large amount of time spent on digital media technologies that is the problem but that it's experienced as separate from the real world. Hence the solution cannot be to further distance ourselves from technologies (disconnecting) but to make it even more thoroughly

integrated. When people get something done using Google it should be clear that although the intelligence is artificial, the benefits are undoubtedly real.

Google's approach, with a shift toward voice-controlled assistants and more elusive technology in form of an omnipresent assistant, makes it easier to put the phone down but harder to escape the Google ecosystem. Using the *Digital assistant* can reduce the feeling of being tethered to devices. It allows to stay connected without having one's hands occupied by smartphones or tablets, as is made visible in the video clips playing to show the *Digital Assistant*: it focus on situations where people otherwise would have to choose between the phone and something else; a steering wheel or coffee mug.

In a paradoxical turn of events, the desires to limit technology use from users' perspective have been met with Google turning their technological integration even more encompassing and elusive. This is, however, not an unusual development. Companies that profit from user engagement, such as social media companies, have shown to approach increasing desire to disconnect by taking "anticipatory measures and build new ways to engage users even more deeply in the processes and practices the platform mediates" (Karppi 2018: 122). Google's offer is convenience at the cost of insight. Although being presented as means for getting individual freedom and control, the services provided by Google can in certain ways also limit freedom and autonomy, without the user being aware of it. The influencing powers of AI are enhanced when it doesn't appear as they are there (Jones 2014: 247, 250).

Human computers

Digital technology is made less visible by hiding its material character. This part of the analysis explore how Google try to make their AI communicate in a more humanlike way, in order to make it more naturally integrated to everyday life. By making the *Digital assistant* 'more conversational' and appear humanlike, Google further blur the distinction between human and computer, fostering more technological integration while avoiding the feeling of the technological overuse that is being portrayed as a problem in the *Digital wellbeing* initiative.

Talking to the phone

As interaction with AI becomes a more natural part of everyday life, the goal is to make the interaction itself feel more natural. Voice here becomes "the foundation of the Google Assistant," and a way to deeper (and unreflected) integration between humans and digital technologies.

To make the *Digital assistant* appear humanlike is of great interest to Google, and it makes one ask what qualities are sought for. To Google, the humanness of the assistant is shown through its capability of natural conversation. It gives the impression of speaking to another person instead of a computer. One benefit of making the assistant appear more humanlike is that it makes it more intuitive to use. For anyone new to a digital device, it can be unclear how it should be used correctly. Google say its goal is to make it "more naturally conversational," one should talk to it like if it was a real person, "without having to adapt to a machine" (Leviathan & Matias 2018). But to sound humanlike requires extremely advanced technological solutions. "AI is helping us make big strides so that everyone can have a more natural conversation with their Assistant" (27 min)

When it's obvious that one is talking to a computer, it may change the way of speaking, trying to be extra clear to get the message through, as if talking to someone that has trouble understanding (Bottenberg 2015: 175). Google thinks we should not have to adjust our ways communicating with technology when the technology can be adjusted to suit us.

When presenting *Duplex*, Google's AI service for making real life phone calls, we're told that it "brings together all our investments over the years in natural language understanding, deep learning, text-to-speech". Ever since the first computers, it has been "human frailty, rather than rationality, that machines have difficulty mimicking" (Peters 2001: 237).

There is of course no real person hiding inside the *Assistant*. Google's new software is capable of fully synthesizing human voice, it "models the underlying raw audio to create a more natural voice. It's closer to how humans speak, the pitch, the pace, even all the pauses that convey meaning". Compared to text communication, the voice delivers information in so many more ways than just through the series of words uttered.

Google want its digital assistant to be "a great conversation partner", which require it "to fully understand the social dynamics of conversation". The assistant's inability to fully act like a human becomes an obstacle that needs overcoming. Users shouldn't have to begin every inquiry with "Hey Google", just as they're not calling their friends by name at the start of every sentence. Therefore, new software updates include the ability keep ongoing conversations with the *Assistant*, and to ask multiple questions at once, "something that feels really natural for us, but it's very difficult for computers to understand".

The anthropomorphizing of computers helps blurring the line between computer and human. This is useful for how we interact with digital assistants, making them a less reflected on part of life (Zuboff 2019: 260). It also solves the problem of technology feeling intrusive that's brought up with Digital wellbeing. The clear distinction that Google want to surpass had the benefit of clarity, who is a person and what is a machine. Emulating human behavior in a mediated environment helps obscuring the otherness of the computer. Its humanlike appearance is made to reduce the feeling of actually engaging with technology.

Every step that makes the *Assistant* more conversational is also an indication of the strengthened ability of Google's devices to collect sound-based information from their surroundings. The *Digital assistant's* ability to provide personalized assistance is dependent on its knowledge about the user (Zuboff 2019: 262).

Blend in

Google's quest for making technology blend in seamlessly in everyday life is best shown through the introduction of *Duplex*, an "AI system for accomplishing real-world tasks over the phone" (Leviathan & Matias 2018). More concrete, users can ask their digital assistant to book a table at a restaurant, whereupon the *Digital assistant* will make the call in the background, without the user being a part of it. Afterwards, the assistant then leaves a notification that the reservation has been made. The demonstration of *Duplex* shows Google's AI making real-time phone calls to a restaurant and a hair salon to schedule appointments, simulating human behavior and voice in a way so that the person in the other end can't tell its talking to a computer. Why would they? There is no reason to believe such a thing if the criteria for being human in the specific mediated situation is fulfilled (Hutchby 2001: 81).

Duplex show how different media technologies provide different expectations of what is considered human, because of what can be stored and transferred through the medium (Kittler 1999). The human features that *Duplex* is unable to replicate, such as bodily appearance, are irrelevant when talking on the phone. In this sense, media are co-constitutors of what i means to be human. They provide the preconditions for presentation and expectation of the self. "The large social significance of the media" writes Peters, lies "in their rearrangement of our bodily being" (2001: 228). In this environment, created by digital communication technologies, the messages are separated from their senders and turned into data. Here, both human personae and computer is represented solely through ones and zeroes, which makes it a mediated environment where its easier to equate humans and computers. All that can be transferred over the line can in theory be replicated by a computer (Hayles 1999: 2; Bakardjieva 2017: 213).

This means that when human voice can be effectively synthesized, humans as a whole can be replicated in a mediated situation where voice is the sole source of authentication. *Duplex* benefits on the phone medium, and its inability to see who is on the other end. It is replicating human behavior in a situation where humans are accustomed to being limited to voice communication, unable to see facial expressions and gestures. The telephone puts the speaker in a situation of "cuelessness" (Hutchby 2001: 86), made human through voice yet remaining anonymous. Still, the human voice can carry a range of emotions and subtleties, which makes the telephone capable of what Hutchby (2001) calls 'intimacy at a distance'. *Duplex* adds occasional filler words like 'umm' and 'uh' to the conversation, which give the AI a more humanlike impression (Turkle 2012: 8) as well as some extra processing time. "The amazing thing is that our system can actually understand the nuances of conversation" explains Sundar Pichai.

Social conventions contribute a degree of predictability that facilitate the quantification of human conversation. *Duplex's* ability to mimic human behavior is facilitated by the straightforward situation of calling a hair salon. Because this kind of calls usually consist of a set of questions and answers – concerning time, date, type of service – it holds a degree of predictability that enables the computer to overtake the task. It's a conversation between two people, but ideally limited to an exchange of information. Surprising elements are unlikely to appear. This is also why Google sees the task as redundant and time consuming. Calling for an

appointment has long been a situation where people act like machines. *Duplex* only work in limited settings, but Sundar Pichai explains the vision for the future:

> Done correctly, it will save time for people, and generate a lot of value for businesses. We really want this to work in case, say, if you are a busy parent in the morning and your kid is sick and you want to call for a doctor's appointment.

Now that *Google Assistant* is made more humanlike, it can help its users avoid real human interaction. You can ask the assistant to order food for you, so that it's ready to pick up without human interaction. The AI becomes a substitute for the real person. Talking, however, is not removed from the process. The user still has to explain its order to the Digital assistant instead of an employee. In the strive to "get things done", and "give users back time", human interaction becomes an obstacle and liability. Who knows what might go wrong in a real conversation? The *Digital assistant* always provide conversation on the users' terms. It's supposed to feel like speaking to a real person, but without the risks associated with it.

When people make Google do the call, they will not hear the call itself, but receive a notification when the task is completed. However, this is not considered a problem but another benefit of the *Digital assistant*. Google not only alleviate from us unwanted tasks, but also conveniently hide it in the background. With this automation of everyday life activities, temporal density can increase while maintaining an uncluttered surface. *Duplex* lets users step out of the processes that are considered unwanted, and they will still be done. And because the user doesn't want to do it, the loss of control over how the actual call is made is not addressed as a problem but a convenience. "When we are done, the assistant can give you a confirmation notification saying that your appointment has been taken care of" explains Sundar Pichai. It's the same interaction that you would have with a human assistant.

New problems

The problems with *Duplex* have mostly to do with the irrational human in the other end, a theme that appear several times across the keynote. The demonstration includes two calls. The first goes as planned, while the other show how *Duplex* handle conversation with a restaurant

employee who lacks sufficient understanding of English. In the call we see that when the human fail to play its part the demands on AI rise dramatically:

Employee: "Hi, how may I help you?"
Duplex: "Hi, I'd like to reserve a table for Wednesday, the 7th".
E "For [pause] seven people?"
D "Umm It's for four people"
E "Four people? When? Today? Tonight?"
D "Next Wednesday, at 6 pm."
E "Actually, we reserve for upwards of five people. For four people, you can come"
D "How long is the wait usually to be seated?"
E "For when? Tomorrow? Or weekend? Or?
D "For next Wednesday, uh, the 7th."
E "Oh no it's not too busy. You can come for four people, okay?"
D "Oh I gotcha, thanks."
E "Yep. Bye, bye."

The restaurant employee misinterprets the date 7th with seven people, an example of the contextual understanding that are hard to train computers to (Leviathan & Matias 2018). She struggles with conversation but not with being human.

The *Digital Assistant* replicate human qualities without the irrational traits that cause so many problems in human–technology communication. It's supposed to be a conversational partner that, unlike a real person, always has the right information and doesn't forget.

> We have many of these examples where the calls quite don't go as expected, but our assistant understands the context, the nuance, it knew to ask for wait times in this case and handled the interaction gracefully.

Humans are a liability when it comes to efficiency. They are easily distracted, can't handle large amounts of information and are prone to making errors. The people interacting with technology shown in Google's presentation become another argument for why we should let Google do the job for us.

The human traits of the *Digital assistant* aim to make it easier and more natural to interact with. But the blurred barriers between human and computer not only solve problems of everyday life but create new ones, tells Google, who have new technological inventions to cope with these challenges.

An unintended consequence that Google diagnose is the possible negative effects on children caused by the rise of digital assistants. With Google's assistant being possible to summon at all time using the phrase "Hey Google," it has become widely used for both adults and children (Telegraph 2018). It's both a tool and caretaker of children, keeping them entertained when parents are busy. The two months leading up to Google IO, 130 000 hours of children's stories were told by the *Digital assistant*. But as more communication is played out between humans and machines, questions arise about whether their increasingly humanlike qualities change our behavior towards machines, and other humans (Jones 2014: 253–4). As the Google employee on stage says:

> Now, as we continue to improve the experience for families, a concern that we have heard from many parents, including people on the team who have children is: are kids learning to be bossy and demanding when they can just say "Hey Google" to ask for anything they need? It's not a simple area, but one step that we've been working on is something we call Pretty Please.

Pretty Please is a software feature to make the assistant recognize and encourage kind behavior, such as ending a question – which really isn't a question but a demand – with "please" or "thank you". The video demonstrating Pretty Please show how the assistant then complimenting its response saying, "You're very polite", "What a nice way to ask me" or "Thanks for asking so nicely" before doing what it's asked to.

> So, the assistant understands and responds to positive conversation with polite reinforcement. We've been consulting with families and child development experts, and we plan to offer Pretty Please as an option for families later this year.

Pretty please is what Stivers would place in the growing category of technology that serves as "a compensation for the impact of technology" (1999: 38–9). As the Google presentation show, many of Google's challenges are arising from how digital technologies are used in society and

the new problems that come with them. "A typical reaction to the negative side-effects of mediatization is not to withdraw, but to solve the anticipated problems by even further introduction of media technologies, so reinforcing, not undermining structure (Couldry & Hepp 2017: 218).

Should you be nice to your device? Saying 'thanks' to the *Digital assistant* is redundant to get the task done. Some will feel compelled to do it, while other have compared it to greeting a toaster (The Verge 2017). A whole new world of moral questions has opened up with the invasion of intelligent machines in our everyday life (Gunkel 2017).

In Google's vision of creating efficient services to free up people's time, manners cost nothing but time. The Assistant was invented to complete tasks without the redundancies of human interaction and cumbersome social conventions. But as soon as humans are to be integrated in the technological system compatibility errors occur.

Pretty please show Google's belief in solving technological problems with even more technological updates. Like *Digital wellbeing*, the solution is not to take a step away from digital technology but to improve it to make it even more integrated. *Pretty please* is another invention to cope with technology's unwanted as well as unintended risks (Stivers 1999: 38), like the improvements to *Maps* and *News* are to help people cope with all the information the two have made visible before. Google often mention the phrase 'in the real world' as to make a distinction between the artificial and the real, but its efforts in *Pretty Please* further fuse the two together. A new generation being born into digital assistants should learn not to separate machines from living beings but to treat them as such. Then technology will lose a bit more of its otherness and become more closely integrated into everyday life.

Conclusion: artificial or intelligent?

What role should technology have in our lives? The analysis finds the relationship between humans and technology articulated in two different, and not so easily conjoined ways at the Google I/O keynote. On the one hand, the *Digital wellbeing* presents digital technology as something one can step in and out of, a distinct domain of the everyday life, put in contrast to "the real world". Looked at this way, no matter how similar to a real human the synthesized voice of *Duplex* sounds, technology is essentially different. We can measure and limit out time spent with technology and the *Digital wellbeing* initiative provides tools for gaining control over it. Wellbeing in this sense is to be an autonomous subject, able to use technological devices as a means for empowerment, yet able to disconnect whenever needed.

On the other hand, the overall vision brought by Google suggests a situation where digital technology is fully integrated into daily life, no longer bound to particular devices and always available by voice. It's envisioned as an omnipresent servant that covers more tasks and domains with every software update. The ideals of efficiency and time-saving that permeates Google's vision of technology encourage users to give away control to Google in order to gain control over their time. This is also a vision where humans and computers blend together, and distinctions are blurred. It's one where communication with human and machine are the same, and where digital assistants should be treated nicely. In the first definition, AI means *artificial*, in the other *intelligence*.

In this thesis, I have used Google's *Digital wellbeing* initiative as an entrance to ask some questions about how Google sees the role of digital technology in our everyday lives. Following the assertion that technologies have implications for our sense of reality, and that it's deeply intertwined with the social, I have asked what it means to be human in the world of Google. In what follows, I will present some concluding thoughts.

What is wellbeing?

To Google, wellbeing and rationality seem inseparable. To live a healthy life is to have full control and thus avoid falling into irrational behavior. What is desirable is to be a productive

and efficient being. Inefficiency, on the other hand, is the main harm of technological devices. People use their devices too much because they lose control over their usage. Google paint the picture of a battle for users' attention, with the users on one side and pervasive digital technologies on the other.

With this diagnosis of the current situation, Google also have a cure: *Digital wellbeing* is presented as a way of giving users the tools to regain autonomy over technology and be able to life free and safe in the digital sphere. Wellbeing, in this context is very much seen as a personal victory, individuals finding a balance that resonate with themselves. Ideas about individual freedom permeate both *Digital wellbeing* and the rest of Google's services.

If bad technology may threaten autonomy, then good technology can improve it. Using digital technologies should be on the users' terms, says Google. *Digital wellbeing* helps users block unwanted incoming information. The tools for measuring and analyzing device use can create awareness of one's behavior patterns, and by extension increase control. It shows both the strong belief in technology as well as metrics to achieve wellbeing (Lupton 2016: 96).

We measure and limit technology use because it manifests itself as a threat to the good life rather than enabler of it: taking valuable time without making us more productive. This is what should be fixed, thinks Google. But disconnecting is not the right way, even if it enhances presence for the moment. In this interconnected world, where so much information from so many different places have impact on our daily routine, we need digital assistance to navigate safely.

Even if one of Google's executives tell the story about how joyful and liberating it feel to disconnect during the vacation, the rest of Google's presentation show that this doesn't mean that we should break up with digital technology, but rather the opposite. The problems with technology should be solved by making it better adjusted to human needs and even more integrated. Vacations are just a temporary break from the ordinary.

A problem with our technological devices is that, while they have become a natural part of daily life, the way that we use them can also be a threat to being present, says Google. The smartphone occupies hands and eyes. Looking down at the screen makes it hard to focus on what's around.

Google provide the tools for taking time off technology, while at the same time pushing for further technological integration in everyday life. We should learn to live without the smartphone, because in Google's vision, digital technology is not located in a distinct device, but as an ambient intelligence. The *Digital wellbeing* app, measuring screen time and phone unlocks, rewards using Google's *Digital assistant*, and to learn to put away the phone. Stop roam around the internet for answers when Google can get them for you.

Digital assistance

On the one hand, wellbeing is to have full control, and to have all the data necessary to do the right choices. At the same time, giving up control is necessary in order to live in accordance to the pace enabled by smart technology. The goal for the *Digital assistant* is to free users from the abundance of information and technological interaction in everyday life, by handing over chores and queries to Google. It changes our way to interact with technology so that it hides it in the background, enabling users to take a break from the fast pace of late modern society, or to fill up the time space with other things. Society is built around an incessant flow of information, connectivity, reachability and for this to go on with people's wellbeing in mind, Google suggest we hand over workloads to them.

Google thinks that we do not need to choose what restaurant to go to, algorithms can do that. Neither should we make the reservation, AI can do that. Drive to the restaurant? The car does it better. We are presented with a utopia in which struggles are conveniently vanished and the way to new, meaningful experiences is frictionless.

However, when Google take care of our duties – searching, scheduling, navigating, calling and driving – they become a powerful agent in shaping our daily lives. With so much information available, knowledge is not only compiling facts but choosing what is important and what isn't (Vaidhyanathan 2011: 177). What emerges is a conflict where users are both proposed to get better control over themselves by giving up control. To 'Make Google do it' means giving up insight to how it's done. The revokes the old question of freedom or security: is freedom to have all choices or not having to worry about choosing (Stivers 1999: 211).

With so much everyday activity taking place through mediated communication channels, critical reflection is needed on how the media technologies themselves affect our lives. Companies like Google enable a new form of institutional powers (Couldry & Hepp 2017: 217–8). They shape and influence the reality in which the user then can experience freely and autonomous. The services presented by Google are liberating and democratic in the sense that they empower individuals with instantaneous access to a world of information. They are widely available and doesn't cost any money. Everyone should be inhabitants in Google's world, but the world building in itself is not a neutral act (Karppi 2018: 2).

Too much to know

Today, lack of information is rarely a problem. Digital media technologies have made information more visible through storing, connecting and communicating. When a Google search give millions of results, it's a reminder of the endless amount of information out there. It is not humane to go through every result. Through their services for managing the world's information, Google effectively point out how much information there is, and make an argument for the inability to cope with it without their help. Search, Maps and News are all part of creating a world in which Google services are necessary.

"There has always been too much to know" writes John Durham Peters (2016: 321), but sometimes it's more evident. The impression of information abundance did not emerge with digital media technologies, but has been around for thousands of years, as pointed out by historian Ann Blair (2010). There is no concrete amount of information that cause this feeling. Instead, it's a mix of personal and cultural expectations, media technologies and both the quantity and quality of the information available (2010: 3). In the middle ages, as books became more widely available, so did also the concern that the abundance of books would lead people to waste time reading the bad books instead of high quality literature. In the era of the printing press, one way of coping with the large number of books was to create even more books: Anthologies and encyclopedias was a way of fighting information overload with even more information[3].

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[3] I got the example of anthologies and encyclopedias from a lecture given by John Durham Peters in 2014 called "What is knowledge good for? And what does communication have to do with it." It can be viewed on YouTube: https://www.youtube.com/watch?v=INEN6n2IR48

Google can be placed in this historical tradition of indexing and sorting the information of the world, making it more easily accessible. Google do not create content themselves (generally) but serve as a compiler and mediator of knowledge. They bring order and cleanliness to a web glutted with information, people, and devices. They remind us of how hard all of this would be without technological help.

When users let the Google AI handle recommendations, searches, news and other tasks the loss of agency is not portrayed as a bad thing. Instead, this is made the biggest selling point of Google's services. They take care of the abundance of information available, filter it and give users what they need, while hiding the unwanted information. The things that Google take care of are unwanted, menial tasks, things that a machine could do instead of a human. To be human in Google's world is to stop doing what computers can do for us and instead focus on what's truly meaningful. The presentation of *News* is characteristic for how Google believe that AI should improve our lives. It not only process information better than humans, but also in more quantities than we could never handle on our own. When everyone can have their voice heard through social media or blogs, it is simply not humane to go through it all.

Being human

What is considered human is continuously rethought in relation to what machines can do. When the technologies around us change, so does the preconditions for living. New media technologies thus have existential consequences (Peters 2016: 315; Lagerkvist 2017). They have us reconsider what it means to be interacting with other people and what that interaction can be like; what is useful knowledge and what is not.

History is filled with things that we don't have to worry about in our day to day life anymore thanks to more specialized technology. When we bake bread 'from scratch' today, it rarely includes harvesting wheat and obtaining yeast. In her study of the transformation of household work during the industrial age, Cowan (1983: 6) remind us that few would know how to make their own bread without external help if so our lives depended on it. This kind of knowledge, crucial for households a couple of hundred years ago, have been turned obsolete because of technological change and centralized, specialized production. At all time, we are surrounded

by technological inventions that often aren't noticed until they stop working or disappear. "The more one work with digital technologies, the more one comes to appreciate the capacity of networked and programmable machines to carry out sophisticated cognitive tasks" (Hayles 2012: 3). Living in late modernity, means constantly making use of goods and tools which we not fully understand how they were made or how they work, as long as they work (Cowan 1983: 7).

Google's technologies not only remind us of our inherent shortcomings but also hold the promise freeing us from them. "Technology is seductive when what it offers meets our human vulnerabilities" writes Turkle (2012: 1). We should be managers of the technologically infused world, deciding what should be done and then let machines do it for us. Sometimes because we don't want to do the tasks needed, sometimes because machines can do them better, faster and with higher reliability. When they work, lacking human senses and therefore not affected by the bore caused by repetitiveness, we can focus on what is truly meaningful, says Google.

Digital wellbeing is about creating technology suited for humans and not the other way around. The _wellbeing.google_ website state that the goal is that "life, not the technology in it, stays front and center".

However, there is also a level of human adaptation needed in a world filled with digital technologies. The *Digital wellbeing* is an attempt to help people live peacefully with the digital, because a life without it is impossible. Technology today is an environment to us in the same way that nature has been historically (Stivers 1999: 23): It presents to us the challenges and the solutions of everyday life. Google are investing in educating children and adults to become better prepared for a world revolving around the digital. An initiative includes educating five million kids to "Be internet awesome", learning to safely explore the web. As technology and society change so does the demands on the people living in it. Google offer to help people transition into the world they too create.

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