Introduction

What do emerging digital technologies think of humans and our worlds, and what do they want from us? Many of these technologies are futuristic, promissory, and sometimes even nonexistent. Thus, they play an increasingly significant role in shaping the future they seek to transform and present methodological challenges to contemporary social research. This article addresses this situation by introducing “digital technography” as a methodology for interrogating and voicing emerging digital technologies. Digital technography draws on ethnography (O’Reilly, 2012; Pink et al., 2016), discourse analysis (Parker, 1992; Potter, 1996; Potter & Wetherell, 1987), and content analysis (Krippendorff, 2004) to examine how digital technologies are imagined as participants in everyday life, placing technologies as agents rather than human actors at the center. I demonstrate how this methodology allows for critical engagement with the sites where emerging digital technologies are promoted, imagined, and discussed from the perspective of their creators, building on previous methodological advances in this journal (Kien, 2008; Mainsah & Proitz, 2019) and elsewhere (Kien, 2009). The methodological focus on promotional materials is essential given that corporate actors in the field of emerging digital technologies apply similar strategies to market their products online. Besides sharing technical specifications, the strategies involve telling evocative stories (Goode, 2018; Miller, 2007) about possible modes of living—stories that align surprisingly well with the affordances of the technologies, while offering potential users the chance to imagine potential futures. The promotional materials used by companies to explain and market these technologies usually include blog posts, short videos, and interviews. They are sites where people share their success stories using these technologies and their visions of a better life. These materials are fascinating because they discuss how and why a particular technology may be valuable to people and what it would require to become so. It is essential to focus on promotional materials for emerging digital technologies as they are more than marketing tools. They serve as surfaces on which designers and developers explain not only the capabilities of their innovative technologies but also make sense of them in their emergence, as “the value of emerging technologies does not necessarily lie in their adoption by a predefined market” (Lanzeni & Pink, 2021, p. 768).

To sketch the methodological contours of digital technography, I use my recent research on wearable self-tracking devices (Fors et al., 2020), digital food technologies...
Kien’s sense should thus be a methodological approach that regards things as agents or “actants” using Latour’s (1992) terminology, and one that holds the vision that “that the relationships between humans and machines are complex and messy but are ultimately possible to document and quite enlightening in what they reveal” (Kien, 2009, p. 18).

Prior attempts to use the concept of technography have produced valuable and thoughtful results, but they are not easily applicable to analyses of contemporary emerging digital technologies where human involvement is, at the most, only an envisioned possibility (or fear). With this article, I give digital technography a different meaning from previous efforts by emphasizing how the makers of digital technologies create symbolic and imagined contexts to make them meaningful, and how these contexts can be critically explored. I am thus adapting Kien’s methodological approach to the requirements of emerging digital technologies that have not yet entered the everyday (but are eager to do so). Emerging digital technologies are here understood as constructs that are “coming into being or are predicted to exist in an imagined future society or possible world” that are “manifested in narratives of technologically driven societal change, which usually have utopian tendencies or at least offer (supposed) benefits to people” (Lanzeni & Pink, 2021, p. 767). Instead of concentrating on how technologies participate in everyday life, digital technography is oriented toward understanding how they are imagined as participants in everyday life and what they require to make everyday life exciting and meaningful for them.

Although recent methodological innovations have opened the door to ethnographic research with and through digital media technologies, it remains a fact that such endeavors tend to focus on the social and cultural practices afforded by or developed with those technologies. Digital technologies are rarely regarded as independent agents, embedded in their own symbolic universe from which they approach and interact with humans. As used here, the term digital technography refers to, paraphrasing Willis and Trondman’s (2000, p. 5) manifesto for ethnography, ways of conducting research that involve sustained and direct contact with imagined futures of a technology’s everyday life. This understanding of digital technography responds to recent calls for ethnography to be rethought in light of current technological advancements (Sumiala & Tikka, 2020). Therefore, “digital technography” is an essential addition to the broader field of digital ethnography (Pink et al., 2016) and more design-oriented approaches such as “thing ethnography” (Giaccardi et al., 2016) and “thing interviews” (Reddy et al., 2021). In contrast to such established methodologies, digital technography explicitly engages with digital technologies as they emerge, and pays attention to the contexts from which they emerge. This approach involves transferring and translating the methods of ethnography, discourse analysis, and content analysis to technography; a move that puts technologies as agents rather than human

From Ethnography to Digital Technography

It was over a decade ago that Qualitative Inquiry published an article entitled “Technography=Technology+Ethnography” where Kien (2008) presented a methodological approach to do ethnographic research on technologies as active participants in everyday social situations. Technography, according to Kien, is a methodology that enables researchers across different fields to understand “how technology dynamically works with human actors to create and maintain the world we live in” rather than relying on an “approach to technology that treats devices and machinery as dead props” (Kien, 2009, p. 1). The concept of technography is not an entirely new one. It has been used in a number of disciplines since the late-19th century, including agricultural sciences (Jansen & Vellema, 2011), studies of technoculture (Vannini et al., 2009) and others. In adopting this concept, Kien wished for a methodological approach that could account for deterritorialized “technological experience” and “ubiquitous mediation,” together making the traditional understanding of the ethnographic field “unbordered” and “unmanageable” (Kien, 2009, p. 14). Accordingly, Kien contends that technology plays a role in the ongoing production of everyday life’s social and spatial arrangements, much like the now-classic arguments of Lefebvre (1991) and Soja (1989), among others. Technography in Kien’s sense should thus be a methodological approach that

(Boztepe & Berg, 2020), and work automation systems (Berg, 2022; Pink et al., 2022a). The examples I have selected involve technologies that are often presented as solutions to problems that do not yet exist—and in some cases, may never exist. It is often argued that technologies like those I discuss here have profound implications for the way people experience themselves and the environments where they live and work. Although these claims are intriguing, they also raise several questions concerning the social and cultural contexts in which such technologies could be appropriate and meaningful. As I have noted, emerging digital technologies not only offer a solution, but identify, explain, and sometimes even create the very problem they are supposed to solve. In addition to being a clever marketing rhetoric, this is also an invitation to examine how these technologies are constructed as meaningful phenomena. My attention to promotional materials of emerging digital technologies as a social science researcher allows me to show how these technologies require that the world is imagined in a particular way that seems in sync with their proposed usefulness, interfaces, and the way they engage with data. By exploring the tensions and contradictions involved in presenting the imagined usefulness of emerging digital technologies, this methodology explores how a symbolic and imaginary context is framed rhetorically.
actors at the center (although these are mere results and representations of designers, engineers, and marketers).

Such an approach requires a theoretical perspective that allows for assessing how technologies are structured and affected by expectations about future benefits and potential risks (Borup et al., 2006; Brown & Michael, 2003). In this article, I draw from the sociology of expectations, a field that acknowledges, as Selin (2008) eloquently puts it, that “the expectations, hopes, fears, and promises of new technologies are not set apart from, nor layered on top of scientific and technological practices, but are, rather, formative elements” (p. 1891). Accordingly, the anticipated everyday life of digital technologies is guided, legitimized, and shaped by shared expectations and experiences of technologies in particular fields. Digital technography becomes meaningful only in a “culture of anticipation” where people’s meaning-making with emerging technologies becomes an arena where possible futures are negotiated (Panchasi, 2009). Such an approach stands in sharp contrast to the “solutionist” agenda that imagines technologically driven societal change as the answer to contemporary societal challenges and that often saturates the market of emerging technologies (Morozov, 2013). Engaging with how emerging digital technologies are presented as solutions opens a space for social science researchers to engage with their futures self-reflexively and imaginatively with the technology in question and play with the possibility of living life in ways implied or requested by the technology. The outcome of such a practice is the object of inquiry of digital technography. In the following section, I provide examples of some results of digital technographic research and explain how this methodological approach came about.

**Digital Technographic Research Notes**

My first data-driven activity tracker was purchased on a cold Sunday evening in February 2015. Throughout the years, I have tried a number of self-tracking devices and apps. Despite that, this one stood out, as it promised to assist me in becoming a better version of myself by gathering, crunching, and visualizing data. As I could not find a clear explanation of what my better self would look or feel like, I began browsing the company’s website to figure out how to use it. Soon I realized that the promotional materials in which the device was discussed were more of a rather exploratory type. This is because the designers seemed to be intrigued by their invention, but not entirely sure why or how anyone would use it. My previous efforts at self-tracking did not include any sort of machine-based feedback. Rather, it was up to me to look for interesting correlations or trends in the data. The device that would guide me to my better self was different. This tool created a data-double of my daily (in)activities, compared it with their global user database and then used some high-tech algorithmic magic to create daily drops of actionable insights. Indeed, this seemed promising, but also quite questionable.

As part of a study that I conducted on self-tracking between 2015 and 2018, my colleagues and I donned ourselves with Jawbone UP wristbands for a few months to understand the experience of living with and being guided by the device. The collaborative digital auto-ethnography (Chang et al., 2013; Pink et al., 2017) invited us to consider life through the lens of a self-tracking device. My experience was anything but easy as this device forced me to understand myself through a language disconnected from the everyday and my embodied senses. Most importantly, I often experienced the advice that was provided by this device as quite uncanny, as if it came from a dominant parent attached to my body, giving me orders without offering a proper explanation, without inviting to any dialogue, without opening for me to say that I don’t want to go to bed or to go for a run. It was not unusual that the problems that these “solutionist” (Morozov, 2013) technologies were supposed to solve were of a social nature, yet with solutions that did not even remotely take into account the dynamics of social life—there was an apparent mismatch between the programmed vision of my life and my own experiences of it. Put differently, the studied devices were imagined from a horizon where engineering, rather than social science, was used to identify (or perhaps create) and solve social problems. Simply measuring activity by focusing on steps made a stressful day at the university department seem more healthy than a lazy Sunday with brunch, mimosas, and a stroll in the park with my French bulldog Rupert. I soon realized that the device and I had quite different ideas about what a meaningful life is—it required a rigid pattern of action and a path in which technology played a more crucial role than human improvisation. Being a human, I could not see that option as viable. It seemed pointless, but there was a sense in which it held some promise as I couldn’t let go of the idea of discovering my better self. I became curious about how technologies, such as this data-driven activity tracker, are constructed by their creators as meaningful, through stories in promotional materials. In the years that have followed this initial study, I have developed a methodology for understanding and engaging with the assumptions underlying emerging digital technologies. Digital technography is a methodology that positions such technologies as sociocultural products marinated with the assumptions and worldviews of their makers. As this methodology critically engages with the ways in which different technologies are envisioned, such assumptions can be fleshed out and explored theoretically.

What are the characteristics of this methodological approach? At its simplest, digital technography analyzes how emerging digital technologies are envisioned to participate in everyday life and interrogates them within their respective (digital) contexts. As such, it examines
technologies as actors who are about to change their habitat and asks what they need to fit with human life. Despite the open-ended nature of digital technography and its ability to be applied to nearly all contexts of emerging digital technologies, it revolves around three conceptual anchors: specification, valorization, and anticipation. These conceptual anchors have emerged in the research projects that form the basis of this article and have guided my work as heuristic devices and as entry points in the research (rather than analytical concepts per se). Through these conceptual anchors, the research process can be sensitized in ways that allow unanticipated dimensions of the materials and future-oriented narratives to emerge.

Digital technographic research always begins with an exploration of the specification of the technology, emphasizing how it is presented as new and useful. During this process, attention must be paid to how human activity, practice, feelings, emotions, and more are portrayed and visualized by and through the device. To do so, one needs to ask what sorts of data these representations are based on and what steps are involved in making sense of them. The key is understanding how human activity and human “data emission” are assumed to be transformed into information that can serve as a feedback loop to people when they are using the equipment in question. Examining the specifications of technologies in their contexts also requires examining how exactness and precision emerge as core characteristics of devices when compared with humans. Without proper access to data and a data-driven calculation, people can often be considered ill-equipped to make informed choices, as illustrated in the next section of this article. In order for a device to fulfill its promises, we need to ask: What kind of data is supposed to be produced by the user and his or her environment? Do you need a certain rhythm and structure for everyday life to work with the device? In what ways does the device handle everyday contingencies (if any are mentioned)? By exploring how people and their everyday lives are understood and conceptualized from the device’s perspective, it becomes possible to sketch the contours of what the technology requires to function properly, and how the imaginaries built into its structure take shape. In addition, it is important to examine what visuals and metaphors are used to convey the benefits of the products (and the risks of living without them) and to explore how they balance the purely technological aspects with those relating to affect, senses, and society.

A study of specifications involves a study of valorization, which can be seen mainly in the business model of a particular company. The question is whether it is made visible or if it is hidden in some way within the narratives about the benefits of the technology. Is it possible to determine how the company makes money (or at least how they intend to make money)? With some activity wristbands, for instance, such as the Jawbone UP discussed earlier, the accompanying app (which was available for free download) could be used without using the wristband. As the company made a great deal of effort to emphasize their software’s parsing of data, it suggests it is rather more of a data-intensive company than one that primarily deals with wristbands. Therefore, it is crucial to take into account how the product, additional applications, and interfaces work with user activity as part of the business model. It is also key to explore what measures are used to build trust in a product, especially when the product is part of processes of change. Consider, for example, the human–machine relationship when describing trust. How are personalization and adaptations described? In such an exploration, it is also useful to examine how the technology is described in different fora and targeted at different audiences. In particular, attention should be paid to how it is defined for end-users and developers, respectively (if an API or similar is offered as an extended service of the device, or if other connections are offered to other platforms or systems in the informational/data ecosystem).

Furthermore, the digital technographic research process revolves around the concept of anticipation, describing how and why certain technologies are supposed to bring about change and exploring how certain specifications and valorizations influence the predicted human–machine relationships. The focus should be placed on how technology is anticipated to change people’s everyday lives and along what routes. One could for example ask: Is the everyday expected to be as precise as the technical operations of the device? Is failure considered possible? Does daily life exist at all from the perspective of the technologies? When posing such questions, it is also important to identify the intended audience and how the device’s data processing is valued and framed. It can be done by discovering what relationships are emphasized when discussing the device and to what extent they are talking about the wellbeing of the technology, to take one typical example in this field, rather than the wellbeing of the people. Also, examine which metaphors are used, as well as the imagined experiences of other people and/or groups invoked in those metaphors, for instance, by comparing how machine–machine and machine–human relationships are portrayed in the materials.

Wearable Self-Tracking Devices

The first example of emerging digital technologies involves wearable devices, specifically those used for self-tracking. These technologies have sensors, as well as other types of hardware that act as an interface between a person and their body and/or the environment in which they live. As in the Jawbone UP example outlined earlier, wearable technologies are frequently connected to mobile devices, such as smartphones, that provide tools for interpreting and
visualizing data generated. Self-tracking devices can be considered a subset of wearable technologies. They should assist people in their everyday lives as a means of learning more about themselves, for instance, how to deal with stress, sleep better, move more, and so on. These kinds of devices and apps are part of a discourse assuming that people need data streams and algorithms to engage in self-discovery and self-exploration (Ruckenstein & Pantzar, 2017, p. 412).

Moreover, this discourse is premised on the belief that people are constitutionally unprepared for making rational, healthy choices, as Schüll (2016) has observed. Through my research, I have examined several self-tracking technologies to investigate how they are constructed with specific user groups and futures in mind. The explored devices include the above-mentioned activity tracker as well as smart jewelry (Berg, 2017), a wearable non-intrusive life-logging camera (Fors et al., 2016), and digital food technologies (Berg et al., 2016; Boztepe & Berg, 2020), not the least with a methodological orientation (Fors et al., 2020). Research I conducted showed how self-tracking technologies, by using a mixture of evocative storytelling along with technologically appealing descriptions, invited and encouraged people to understand their past, present, and future in particular ways by using algorithms and data. The promotional materials I encountered and engaged with often described contemporary society as being hectic, complex, and intense, not least because of technological developments. For instance, through my research on the smart jewelry Ōura and Moodmetric, it became clear that the rings were marketed with the assumption that people have lost their “connection with nature.” According to the materials, contemporary society does not encourage us to deal with our “mind problems”—without proper technological and data-driven guidance, we are unable to know “how hectic it is for you and find ways to wind down.” In a similar vein, it was said that devices of this kind could help people “connect with their body better to build up their own understanding” and that the devices helped to “open a window to the body” (Berg, 2017, p. 7). As with the Jawbone UP activity tracker, the smart jewelry, and the connected camera, they were presented, although implicitly, as ways to deal with or even overcome the effects of societal/urban life; they provide insights into how people “really” feel and what is happening in (or around, in the case of the camera) their bodies and minds. To exemplify this state of affairs, we could turn to Niina Venho, CEO of the company that makes the smart jewelry Moodmetric. Presenting some possible uses for the device, she argues that people cannot rely on their embodied perceptions alone to understand their feelings: “you think you feel something, but it’s something else actually. But most people understand: yes, I’m really stressed now, but most people don’t know what to do about it” (Fors et al., 2020, p. 87). In the research, it became clear that the companies in this field found it difficult to express insights about bodily reactions as a remedy to what is going on in the social everyday life as their logic was constantly glitchy—and this became especially apparent when I self-reflexively and imaginatively participated in the research process by putting myself in the situation of being a potential user of the device.

The design of the devices and apps I studied often assumed—and even required—that people live in a structured world without everyday contingencies, much like how the devices themselves relate to the world through fixed interfaces and well-structured, neatly packaged data flows. An illustrative example of this can be found in a blog post by Kelvin Kwong, formerly senior product manager and head of behavior change at Jawbone, in which he discusses the potential of his self-tracking device:

> My Smart Coach knows that I typically wake up around 7:00 am, so if I’m still awake at 12:30 am, it can tell that something is awry. But unlike my father, Smart Coach crunches my data 24/7 (no offense, dad) and points out that for every 30 minutes I’m up past my normal bedtime, I tend to be 8% less active the next day. (Cited in Fors et al., 2020, p. 82)

As these ideas evolved in different studies, they took different forms. Nevertheless, they all relied on a somewhat paradoxical understanding of people as complex and difficult to decode and understand, yet at the same time, they were portrayed as machine-like and algorithmically structured; needing appropriate interfaces to understand the data generated by and through them and their activities. By accessing data, visualizations, and interpretations, people were supposed to learn more about themselves and what was actually going on in their minds, under their skins, and so on—information that, as the developers of the self-tracking devices seem to argue, would be difficult to obtain without their products.

Often I encountered the idea that the devices would allow me to understand what is “actually” going on in my body, but I found the idea of what is going on “internally” as a response to “external” factors quite far-fetched. I was presented with the notion that my body was vulnerable, in need of assistance, actionable guidance, and even repair. The one-sided focus on my inner life seemed to overlook any of the social aspects of everyday life. However, the devices were intended to provide me and other users with an interface through which we could glimpse into our inner lives by providing information on what is happening in our bodies. Throughout this research, it became evident that there is a fundamental tension between technological possibilities (the quality of sensor data, algorithmic calculation capabilities, etc.) and how/why such devices and apps can be used in everyday life.
Digital Food Technologies

As a second example, I focus on digital food technologies—a category of devices and apps that shows many similarities with the wearable self-tracking devices, yet in a different way involves and relies on socially constructed rituals and practices. In collaboration with my colleagues, I have examined a variety of digital food technologies (Boztepe & Berg, 2020), as well as undertaken fieldwork on culinary futures and self-optimization in a biohacking community (Berg et al., 2016). Several years ago, when we began exploring the growing number of digital food technologies, we soon realized they tended to present healthy eating and cooking as an individual activity, despite the well-known fact that social and slow eating—in the presence of other people rather than screens—is key to a healthy relationship with food. We were intrigued by the idea of turning eating into a highly digitalized, highly individualized practice, but found it provoking as it reminded us of a McDonaldization process (Ritzer, 2019) on steroids. Similar to the example above, our studies have examined how digital food technologies, for example, a food-recognizing plate and an eating pace-controlling fork, envision people planning and eating their meals as part of their everyday lives with self-surveillance, measurements, and predictability at their core.

We studied a food recognizing plate that uses machine-learning and data-driven photo recognition of food to detect dishes and food items as well as to provide nutritional information to help people understand what they are about to eat. The Smartplate Topview is a plate with an integrated smartphone-connected scale that is presented as “the world’s first Intelligent Nutrition Platform that uses advanced photo recognition and AI technology to identify, analyze, and track everything you eat in mere seconds” (cited in Boztepe & Berg, 2020, p. 185). The smartphone’s built-in camera detects what is on the plate (a maximum of three foods) and records their nutritional values in a personal digital dietary journal, which gives individualized feedback. In an instructional video, CEO Anthony Ortiz demonstrates the Smartplate’s image recognition capabilities by demonstrating three kinds of preserved meat. “Notice that these three kinds of meats come from the same animal species,” he said as he placed slices of ham, salami, and prosciutto on the plate. He touches the meats and says they have similar colors and textures, so how can the smart plate tell the difference, he asks rhetorically. After fiddling a bit with the device, he shows that there is a match as “within just a few seconds our system is analysing those images, it’s sending it to the cloud for recognition” (cited in Boztepe & Berg, 2020, p. 185). This device can detect and analyze thousands of foods and food items, including many dishes on chain restaurant menus, it is said. This practice not only requires all food products to assume standardized shapes and appearances but also strips culinary and eating practices of individuality and creative expression and forces people to eat simpler and less creative meals (i.e. fast-food). In other words, the trope of personalization that works as an axis in this era of emerging digital technologies is rendered borderline pointless because the technology limits what can and should count as personal.

The food-recognizing plate changed the practice of cooking, but the food intake-regulating fork that was explored reconfigured the practice of eating by providing haptic feedback on eating mechanics, while keeping track and visualizing how people eat. HAPIfork, as it is called, is essentially a bulky fork connected to a digital platform that allows users to review their meal pace on a dashboard with the aim to promote “happiness, wellness, and better health” (Boztepe & Berg, 2020, p. 135). By integrating diagrams and visual cues, the dashboard turns eating into an activity that can be analyzed and controlled. While moving the fork between mouth and plate, the feedback was supposed to be observed, preferably without interference from the dinner guests. Potential users were invited to eat in front of a screen to monitor their eating rhythm and pace in real-time and get feedback on how well they are doing. This device reminds me of adults positioned like babies, trying to eat without making a complete mess. Even though it would most likely slow us down—fumbling with such a device and its accompanying apps takes time—it fundamentally reconfigures what eating and food are by inviting us to dinner parties where only ourselves and our screens are present.

The technologies studied here used sensors and smartphone connectivity to gather, process, analyze, and visualize different kinds of data. These two are part of a technological landscape that identifies eating habits as a problem that is best addressed by means that are external to the person. Dietary advice, weight-watchers, and similar forms of organized regulation of food intake have a long history, but the emerging field of digital food technologies is different as it emphasizes automation and lower levels of personal involvement. In this brave new world of eating, success requires personalized technologies that can identify, measure, analyze, and track the foods and beverages consumed throughout the day. Despite the fact that this branch of technologies addresses a well-identified problem—people across the globe (at least its wealthier parts) are overweight and obese—they do so by separating the nourished body from its eating self. The food technologies we have explored in our research should be understood as sociocultural devices that offer users alternative and perhaps better futures if they are willing to think differently about cooking and food in ways prescribed by the technology. The underlying concept in digital food technologies is that people’s bodies and eating habits are attainable and controllable and that food ought to simply be understood in
terms of its nutritional value, not its social or cultural value. This is why technologies of this kind position the solution to bad eating habits outside by rethinking the practice through a technological and standardizing lens. We were once again introduced to the idea that it is possible to develop real change by removing social and cultural beliefs and conditions and rather think of human life as procedural, predictable, and standardized. Such an understanding of people and what they consume is based on the same logic they want to get away from, namely the fast-food industry and their standardized portions and contents where, for example, a Big Mac should look and taste the same no matter where you order it.

**Work Automation Platforms**

Third in this series, this final example moves from the personal to the professional as it is about platforms for work automation, based on results from my ongoing research project (Berg, 2022), in which I examine the expectations and experiences of automated decision-making systems across different levels of the Swedish public sector. These systems are implemented by software developers and consultants at information technology (IT) companies contracted by public institutions. It has become increasingly interesting to me to see how they, and the platforms and systems they provide, are expected to support or perhaps even replace work tasks in public administration. Unlike the previous two examples, work automation platforms are an arena for digital technology in that they invite people to re-imagine a part of their lives that, for most of us, is a necessity, namely work. Globally, there is a growing interest in the use of software robotic support in a variety of forms across the public and private sectors. There are multiple automation platforms for different purposes. In a similar way to the examples of wearable self-tracking devices and digital food technologies, platforms for work automation are marketed and made sense of by creating a symbolic and somewhat imaginary context, within which the promoted technologies seem to make perfect sense. Rather than configuring the body or eating habits as measurable and needing data-driven guidance, these platforms require discursive practices that create a particular taxonomy of work tasks.

Often, work automation is motivated by the fact that previous digital transformation processes have given us more tools, systems, and devices than we can handle as they have made our work lives more messy and complex than manageable. It would appear that the introduction of work automation platforms helps companies and organizations free up time by taking away repetitive and “dull” work tasks and allowing professionals to focus on creative, rewarding, and seemingly more complex tasks. As an example of this state of affairs, we can turn to Mary Tetlow, Vice President of Global Brand Experience at the automation platform company UiPath, who explains why she thinks their services are important. She writes that many people in offices are “stuck performing the same repetitive work tasks over and over. Day in, day out. . . . People are capable of so much more when they’re empowered to do what humans do best: tackling the big problems.” In contemporary workplaces, however, this is regarded as impossible because, as she adds, people must “keep track of multiple pieces of technology at the same time” and “nobody can multitask that well” (cited in Berg, 2022, pp. 161–162). Platforms such as these are believed to enable people to work with tasks they “are made for” by changing the very nature of work. Being a young—or such is what I think of myself as—university professor caught up in the never-ending drudgery of administrating myself, my research, and teaching, the idea of having a little robot taking care of all the boring stuff was quite appealing at first. I was then moved to think about how the automation discourse would compare with, for example, the long career path to becoming a sushi chef in Japan—which is the first example that came to mind. Standing in front of the cutting board at a sushi restaurant requires years of tedious work. As opposed to thinking of slicing ginger or scallions, or perhaps cooking rice, as pointless work, they are seen as essential trade practices. When applied to the world in which I—and probably some readers of this article—work, automation seems quite impossible as it would remove crucial components of our trade. This is not how UiPath views work, however. Rather, their services are envisioned as rewriting the story of work by allowing people “to focus on the things they do best and enjoy more: innovating, collaborating, creating, and interacting with customers.” Hence, the “crap kind” of work or “the drudge and data and admin and damned expense reports” (cited in Berg, 2022, p. 162) could be avoided.

Consider, for instance, what ethnographic research might be like if we didn’t interact with the materials, never listened, or transcribed our field recordings, or if a robot colleague searched databases, parsed, and compiled the collected papers into a neat state-of-the-art analytical section. As I read through the promotional materials that attempt to explain how the platforms can provide work futures, I noticed how design-oriented and creative tasks, such as robot tinkering and script fiddling, were regarded as work activities that could benefit professionals in all sectors and roles. In fact, the purpose of work automation platforms is not simply to add robotic support to workplaces, but rather to initiate a broader transformational process. This requires an understanding of work that divides into the following two opposing categories: the boring parts and the creative parts, where the latter has meaning and resonates with human nature. Consequently, a situated and transformative knowledge of what work is and can be is produced. It appears that automation platforms do much more than
simply transform work tasks as they also, and more importantly, claim to liberate human potential. It is common for work automation platforms to be described through the construction of future scenarios. Current work conditions and general ideas about work are viewed as problematic and in need of repair—something robotic support is designed to contribute to.

Stories about the future of work provide an understanding of past, present, and future work required for the work automation platforms to make sense and be desirable. However, these stories overlook several crucial aspects of contemporary work life. Work is, for example, always situated within a global capitalist system that requires differentiation between different roles and levels. The seemingly creative work tasks can, however, end up being tedious and repetitive in the long run. In stories about work automation platforms, these dimensions are somewhat underplayed, and this is often a great example of how emerging digital technologies require quite a lot from the world that they desire to become a part of—in this case, the adoption of a particular taxonomy of work and tasks that may or may not be useful in real life.

**Digital Technographic Pasts, Presents, and Futures**

Despite being relatively different technologies with different areas of application, the examples I have presented earlier demonstrate some critical similarities. Self-tracking devices, digital food technologies, and platforms for work automation are being touted as solutions to everything but specific problems. We have seen from the short presentations that they do not just tell stories about their products—that is something all companies do—but rather, they tell stories that are necessary for their products to make any sense at all. There is a sense of utopia associated with the promotional materials examined when they describe the future of automation they are promoting. To understand how and why these solutionist accounts relate to an identified problem, it is crucial to explore their proposals. It involves asking what that particular problem consists of, why it exists, and how its solution might work in everyday life, as well as what happens when it is finally resolved. The studies I have presented examine the interpretive repertoires involved when promoting and making sense of emerging technologies, while presenting and theorizing how they are deeply embedded in broader social and cultural processes. It has been demonstrated that emerging digital technologies of the kinds under discussion here are influenced by the ideas, assumptions, and agendas of those who created them. This suggests that a robust research agenda is necessary to unmask critical assumptions and power relations involved in how emerging digital technologies are developed, implemented, and used (see also Pink et al., 2022b). Digital technography is an essential component of such an agenda.

Emerging digital technologies are often closed systems that are difficult to study, not least because they don’t necessarily target an established market—and sometimes, they are even yet to exist. As is the case with all technologies, they should, however, be considered sociocultural products driven by ideas, values, and expectations about their potential. A digital technographic approach engages with the technologies and their everyday worlds, as imagined by their creators—here, limited to promotional materials that prepare the world for their co-existence and the experience of engaging with them reflexively. By studying such materials, we can understand how these technologies should be introduced into people’s lives and how designers, developers, and marketing people view and imagine the relationship between their technologies and the world around them. Engaging in digital technographic research involves exploring how digital technologies—as extensions of their creators—perceive their environment and how they want to interact with people in that environment. As with ethnography and other qualitative methods, digital technographic research does not follow a linear process. Therefore, providing clear, straightforward instructions on how to conduct such research does not make much sense. Nevertheless, as the examples earlier demonstrate, by using the conceptual anchors: specification, valorization, and anticipation as entry points into the digital technographic research process, researchers can gain an understanding of how a specific digital emerging technology aims to become part of everyday life.

Therefore, digital technography understands promotional materials as propositions for living together, including both their technical and evocative aspects. Concepts such as these contribute to how emerging digital technologies are presented to potential users and how they anticipate their futures given their technical specifications as backdrops. In addition, they allow us to explore how emerging digital technologies require future forms of interaction—understood as data flows of which only a few are relevant and packaged suitably—are made “algorithm ready,” as Gillespie (2014) suggests. Taking the promotional materials as a whole, it is essential to attend to tensions, contradictions, and rhetorical “glitches,” where there is an apparent inability to explain a specific feature or perhaps an uncomfortable mismatch between the everyday lives of people and the technologies in question, that appear in the materials. The above sections illustrate what engagement with this kind of technologies and their promotional materials could look like for wearable self-tracking devices, digital foods, and work automation platforms. Even though these examples represented a wide range of emerging digital technologies, it remains to be seen how other technologies of their kind may be explored through digital technography.
Conclusion

As I stated at the beginning of this article, emerging digital technologies are growing in popularity and importance in contemporary society. Often, they are seen as futuristic solutions to problems that cannot be easily described. There have been three examples from previous research presented that highlight the importance of attending to the technologies themselves, engaging reflexively and imaginatively with them, and of examining how their creators produce promotional materials that provide a symbolic context within which these technologies make sense. As marketing materials, the technical specifications and evocative stories that we found during our research might seem trivial. Nevertheless, they have an important role to play. Using these materials, we can explore and observe the dynamics of solutionist technologies, allowing us to sketch the contours of the problems these accounts set out to solve. In this way, digital technography allows us to approach the technologies from their (and their creators’) perspective through analyses of promotional materials containing sense-making narratives from developers, engineers, and designers—an opening up to the world of their values and ideas. When working with emerging digital technologies, and especially with those that are yet to exist or find their place in our world, taking the perspective of the app/device/system is of utmost importance. A critical inquiry like this can also facilitate cross-disciplinary research, especially dealing with tensions between social sciences and engineering, as, as we saw earlier, engineers often use mundane accounts and language figures to make sense of their technologies (and perhaps vice versa as well).

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