


# Toward a Datafied Mindset: Conceptualizing Digital Dynamics and Analogue Resilience

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## Abstract

This article explores the ways in which what we call the analogue and the datafied mindsets perceive the functioning of the datafied world. Based on a qualitative interview study of two generations of media users in Estonia, Portugal, and Sweden, we present and analyze underlying patterns in participants' media attitudes and related practices. We show that belonging to a media generation does not always produce a homogeneous mindset or a uniform attitude toward media technologies. These mindsets, being ideal-typical constructs, are not bound to individuals: the same person can display features of the analogue and the datafied mindset in relation to different parts of the datafied world. One mindset does not replace the other but rather adds another layer to the social action of the individuals. The mindsets are multi-dimensional and molded by contrasting understandings, indicating that the tenacious structures of the analogue world linger on in the datafied social space.

## Keywords

mindset, data privacy, media generations, digital media, datafication, social media

## Introduction

In datafied society (Schäfer & van Es, 2017), pervasive digital tracking and profiling systems are used to produce, collect, and process data on users across websites, devices, and areas of life (Mejias & Couldry, 2019; van Dijck, 2014; van Dijck et al., 2018; West, 2019). Every interaction produces user data about behavior and, as digital participation is impossible without sharing personal data, digital citizenship comes with a price: “Individuals no longer can meaningfully participate in society without paying with their personal data as a kind of entrance fee” (Lutz et al., 2020, p. 1169).

The fact that the social media logic (van Dijck & Poell, 2013) is built on the tracking of digital media users tends to be part of common knowledge among users themselves. Although they might not have detailed knowledge of the technical ways in which data are collected and processed, users are, at least when prompted, aware that they “pay” with their data for access to social media and search engines. This awareness, however, is mostly directed toward representational data, that is, the openly visible traces left on, for example, social media that other social subjects can access (see, e.g., Bolin, 2018; Bolin & Velkova, 2020; Leckner, 2018). However, substantial amounts of information produced by

media users are not intended for human interpretation but are nonetheless driving the operational logic of social media. Andrejevic (2020) argues that this transition from a representational to an operational logic makes it hard for people to acknowledge deeper levels of information related to their media usage. Nonetheless, it is the operational logic that decides which types of content are provided to individuals on social media platforms, or which search results are ranked highest. An interesting question, thus, is: To what degrees do people heuristically adapt to these subtler levels of data extraction and the operational logic of social media? And how can differences in attitudes and practices be explained?

Previous debates on the implications of datafication have suggested that media users could develop a quantified reasoning, leading to a “big data mindset” (Mayer-Schönberger & Cukier, 2013, p. 129; van Dijck, 2014), or a “metricated

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mindset” (Bolin, 2022; Bolin & Andersson Schwarz, 2015). A mindset can be described as a mental attitude or inclination—“a wider system of perception and conception” (Pettitt, 2013) which molds our perceptions of the world and affects our dispositions to act in it, similar to how the Thomas theorem—“if men define situations as real, they are real in their consequences” (Thomas & Thomas, 1928, p. 572)—describes how perceptions affect social actions. In this sense, “mindset” is a sociological, rather than a psychological, concept. A datafied or metricated mindset would thus be based on evaluating social actions and relations according to the logic of datafied media. Indications of this can be found in small-scale experimental research (e.g., Bolin & Velkova, 2020; Grosser, 2014). Previous research on media generations and media grammar also suggests that there are clear divisions between how older and younger generations relate to digital and datafied media (e.g., Bolin, 2016; Kalmus, 2020). What exactly influences these divisions, is, however, not fully explored.

This article will use the insights from a qualitative interview study of one younger and one older generation of media users in Estonia, Portugal, and Sweden to understand how representatives of different generations, with varied experiences of analogue, digital, or datafied media during their formative years, and respond to the datafied algorithmic logics of contemporary social media.

In particular, we are interested in understanding how experiences of pre-datafied media that the older generation has grown up with might influence ways of relating to the datafied media landscape. By “datafied media” we refer to online media that have the technological capacity to extract, process, and package user data at scale into a commodity that can be circulated on a market mainly for economic profit. The process of datafication, we thus argue, is both a technological and an organizational process, where new digital technology is coupled with new business models (for a detailed discussion, see Bolin, 2023). We use the concept of “analogue media” as an analytical shorthand to describe media built on the technologies and business models that preceded digitalization and datafication in the historical process of media development. Since we are testing whether the ways in which the pre-datafied media operated have set their mark on the mindsets and practices among those who have grown up with them to the extent that they may have difficulties in understanding, and thereby, managing the operational features of datafied media, we find heuristic value in this distinction. The presupposition that we take as our point of departure is that the operational forms of datafied media are integrated into an analogue explanatory model among media users that works against acting according to the dynamics of datafied space.

The next section provides a more detailed overview of previous research on experiences of datafication in everyday life. The section includes the debate around mindsets and action, and generation theories as related to the media. In the

subsequent section, we outline our methodological approach, after which we present our analytical model of mindsets, grounded in our findings, and elaborate on the tensions between the analogue and the datafied mindsets. The concluding section includes some reflections about how both mindsets and the datafied landscape intertwine and influence each other.

## Theoretical Framework

In the last decade, the interest in studying social and cultural transformation in the era of the computational turn has increased substantially. Data practices—the systematic collection, analysis, and sharing of data and the outcomes of these processes (Schäfer & van Es, 2017; van Dijck, 2014)—are restructuring the core of culture and social organization, and everyday routines, which increasingly involve the use of digital media, and contribute intensively to the production of large-scale data.

The acknowledgment of the new roles of datafication in society has intensified the interest of research in exploring what people know and understand about data as well as how people experience datafication in everyday life (Kennedy et al., 2020; Lupton & Michael, 2017). Findings suggest that people’s knowledge about what happens to their personal data is varied: while some people have knowledge about institutional data collection, others do not; and, if users have a sense that living in a datafied media landscape means that their data are collected, that does not mean that they are aware of the extent to which this is the case. Some people may know that they contribute to big datasets when engaging in diverse activities, such as posting comments or uploading photographs to social media platforms, purchasing goods and services online, using apps on mobile phones or self-tracking devices, or any other manifestations of the “quantified self” (Sharon & Zandbergen, 2016). Fewer people, however, know that data about their digital activities and information other people share about them are also tracked and gathered (Ytre-Arne & Das, 2021).

In facing data collection online, *social privacy* seems to matter more to media users than *institutional privacy* (Young & Quan-Haase, 2013). These privacy considerations speak of the importance of *contextual integrity* (Nissenbaum, 2004), and trigger situational adaptability (Masur, 2018). Similarly, Kennedy et al. (2015) argue that users engage in case-by-case assessments of whether data mining practices are “fair.”

This does not mean, however, that people experience data collection online with indifference. In a scenario where individuals experience limited control, resignation combined with normalization may reveal a sense of surveillance realism (Dencik & Cable, 2017), privacy apathy (Hargittai & Marwick, 2016), privacy fatigue (Choi et al., 2018), or privacy cynicism (Lutz et al., 2020).

Alongside the questions related to privacy and surveillance, new issues concerning the tangibility of data and its implications are emerging. Andrejevic (2020), by making a distinction between the representational and the operational media logic, argues that “the collapse of representation into operationalism makes it harder for humans to ‘see’ how decisions are being made and thus to discern the reasons for their consequences” (p. 20). This means that the logic of automation is post-representational: it produces information not intended as representations for humans to look at, but as data to be read and acted on by machines. Previous research has also found that users are much more concerned with the spreading of representational information about themselves (pictures, personal information, etc.) to other people than they are with sharing metrics about their behavior online with large corporations (Bolin & Velkova, 2020).

Furthermore, knowledge and understanding about how datafied media work is unevenly distributed among different generations and other socio-demographic groups, with younger and more educated people usually having more awareness and knowledge than older age groups (Marwick et al., 2017; Woodruff et al., 2018). These tendencies are in line with the theory of media generations positing that the media individuals confronted with in their formative years of youth set their mark on subsequent media grammar and use (Bolin, 2016; Gumpert & Cathcart, 1985). A media generation can be characterized by generational habitus—a collective set of dispositions, shared by people born around the same time, influenced by the social, cultural, or technological context in which they were socialized (Edmunds & Turner, 2002), and manifesting itself in media-related practices and mentalities such as channel and platform preferences, and attitudes toward the advantages and risks of online media (Kalmus, 2020).

The concept “generational habitus,” by being inspired by Bourdieu, refers to a relatively stable phenomenon. Habitus is conceptualized as a “system of internalized structures, schemes of perception, conception, and action” (Bourdieu, 1972/1977, p. 86), and can be described as the internalized set of dispositions that structures someone’s perception of and action in the world. In our endeavor to understand a more dynamic process by which people heuristically adapt to more subtle levels of online data extraction in the datafied media landscape, we employ the concept of mindset in its sociological sense—as an organized representation of the world, aligning with Bourdieu’s concept of habitus. We, however, theorize mindset as “a more malleable disposition compared to the habitus” (Bolin, 2022, p. 104). We understand mindset as a more dynamic concept, sensitive to change as a result of new observations and experiences. Still, when interpreting new phenomena such as digital dynamics, a mindset functions as a filter in integrating new experiences into its understanding of the surrounding world.

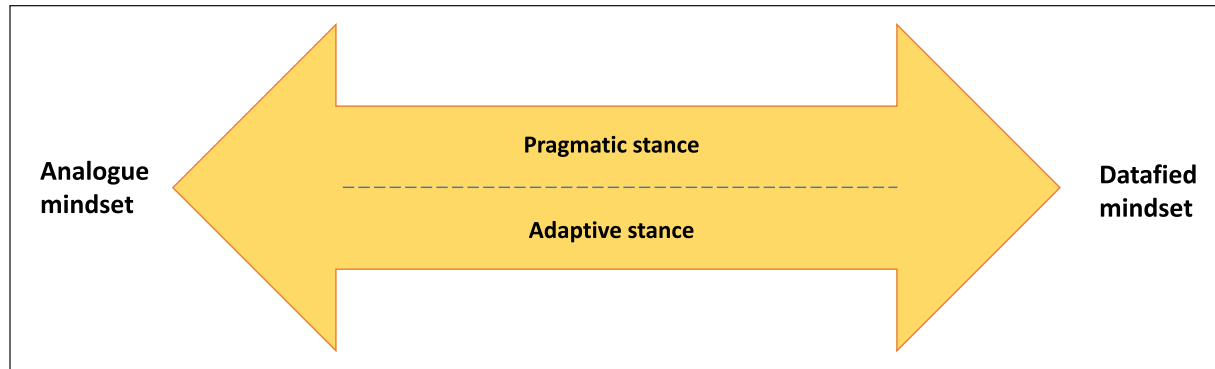
In this article, we are interested in understanding how the datafied media logic manifests in media users’ mindsets and

social actions. While it might be tempting to think of the datafied mindset in terms of “digital literacy” (e.g., boyd, 2018; Buckingham, 2019), we suggest a complementary approach to “digital literacy” and similar concepts. Narrower versions of digital literacy put an emphasis on mastering digital skills and competences, while broader approaches aim to promote media users’ critical abilities to interact with media technology from a position of active inquiry (Buckingham, 2019). Media education is then projected as a multi-dimensional process of acknowledging how the datafied media operate. Against this work of conscious awareness and educational efforts, we highlight a less reflexive character and non-institutionalized formation of a mindset. If literacy can be described as a set of skills that can be learned and forgotten, a mindset is an internalized structure with some malleability. Similar to the way in which a habitus is “society written into the body” (Bourdieu, 1990: 63), we could, by analogy, say that the datafied mindset is *social media logic written into the mind*. We, however, emphasize that individuals’ experiences, actions, and deliberations play a crucial role in the formation of mindsets, thus denying any media deterministic accounts of the process. Hence, to complement the line of research on the more manifest expressions of media users’ digital skills and coping strategies (Buckingham, 2019; Vissenberg et al., 2022), we are aiming to understand how the datafied world operates among users in terms of heuristically evolving responses in mindset.

## The Methodological Approach

The broader context of our analysis is a project aiming to find inter-generational differences and similarities in media users’ attitudes toward the extraction of their data in three countries with different socio-cultural contexts when it comes to approaching the datafied society: Estonia has invested a lot of effort into becoming a leader of digitalization since the 1990s; Portugal, a country with a diffuse strategy for the digital society, and Sweden, also at the forefront of digital development, but with less pronounced policy goals compared to Estonia (Kalmus et al., 2022).

In these countries, we conducted 15 focus groups (consisting of two to five participants) and 16 individual interviews among two generational cohorts of Internet users: one born in 1946–1953, and the second born in 1988–1995. Among both cohorts, we composed three mixed-gender groups with different socio-demographic profiles: one with higher education; one with mixed educational levels, living in a small city or countryside; and one with secondary education. Each group involved participants with greatly varying occupational backgrounds. The total number of interviewees was 71 (38 female and 33 male), and they were recruited through a combination of “snowballing” (Patton, 1990), and interview panels of professional polling agencies. The semi-structured interviews were conducted in the participant’s native language between late Spring and early Winter 2021.



**Figure 1.** Model of the analogue–datafied mindset continuum.

The interviews were thorough, lasting for up to 1.5 hr. Due to the COVID-19 pandemic, all focus groups were conducted online, which affected the group interaction by making it almost non-existent. Therefore, we have analyzed the data from focus groups and individual interviews similarly—as representing individuals’ way of thinking. All interviews were transcribed in full, anonymized, and translated into English (for details, see Bolin et al., 2023).

We first applied thematic qualitative content analysis and hand-coded the transcripts deductively according to an initial coding scheme based on our research questions. Second, by being inspired by the grounded theory approach (Strauss & Corbin, 1990), we hand-coded the transcripts inductively to explore and categorize emerging themes and the participants’ experiences, interpretations, and meanings related to digital media, online surveillance, data capture, and other online risks.

We then proceeded to axial coding (Strauss & Corbin, 1990) to construct our analytical dimensions. This iterative process involved abductive reasoning, whereby we were guided partly by existing understandings of the tensions in the contemporary media landscape, based on previous research, and partly by close reading of the interview data. We constructed the main category with three sub-categories, all seen as continuums that accommodate a wide empirical variety of practices, perceptions, and attitudes, and designated them with opposing end labels:

- Analogue–Datafied (the main category to describe the ways of perceiving the datafied space and the logic of reasoning);
- Limited–Extended (to describe the diversity of habits and practices and regularity of using digital media);
- Fixed–Flexible (to describe the inclination and willingness to learn about digital media and adapt to the datafied space);
- Indifferent–Vigilant (to describe attitudes toward datafication and user monitoring).

The abductive reasoning, thus, led us to explore social conditions that structure the way in which individuals perceive the functioning of the datafied world, and how experiences of

pre-datafied media landscape influence ways of relating to the datafied social space.

As expected, we discovered a systematic difference among participants of the two generations, which led us to develop a model for understanding the dynamics of these differences. In the next section, we will account for this model and exemplify the analytical categories with quotes from our interviewees. All quotes are anonymized and are referred to by fictional names indicative of the participant’s gender.

### The Analogue–Datafied Mindset Continuum

The analytical categories helped us map the tensions between the two ideal-typical mindsets as the extremes on a continuum, ranging from what we called the *analogue mindset* to what we designated the *datafied mindset* (Figure 1). By “analogue” we mean the media based on the technologies and business models that preceded digitalization and datafication, and the mindset formed by experiences and interactions with such media, that is, printed media, radio, and TV of the pre-digital time. We want to stress that “analogue” media also includes early digital versions before the media became datafied and new business models were introduced. By “datafied” we refer to the technological features of digital media, as well as the organizational forms and business models, based on pervasive digital tracking and profiling systems, and the corresponding mindset.

Furthermore, within this continuum, we observed and conceptualized two stances or approaches to the datafied world: one *pragmatic* (challenged by datafication, but valuing benefits and trade-offs involved), and one *adaptive* (motivated and aspiring to keep up with datafication but partly restrained by the habits and practices formed during the pre-datafied times). These stances are not to be considered “stages” toward a datafied mindset but are rather representing qualitatively different ways of relating to the datafied media.

The analogue and the datafied mindsets are ideal types—analytical constructs or idea-constructs in Max Weber’s

(1949) sense, that we formed through accentuating certain ways of thinking and acting in the datafied space as well as through synthesizing concrete dispositions. Hence, the analogue and the datafied mindsets in their purest form do not correspond directly to actual individuals—one cannot find such pure states of mind in real social subjects. The pragmatic and the adaptive stances, similarly, are our analytical constructs describing people’s responses to the challenges of datafied media and representing different ways of coping with them. While the stances are indicative of one’s prevailing reasoning in the interplay between digital dynamics and analogue resilience (the tenacious structures that are formed by the habits of using pre-datafied media), the same individual can express one or another stance in different situations. It is important to keep in mind that we categorize ways of thinking and acting, not people.

### The Analogue Mindset

In its purest form, the *analogue mindset* is a state of mind that evaluates the datafied space by existing social norms of the pre-datafied and offline world. It is structured by a set of practices and attitudes formed in relation to the analogue media, manifesting in narrow online repertoires and crystallized patterns of use in the Limited–Extended category. The analogue mindset is also hesitant and insecure when it comes to acquiring new digital skills and making use of novel applications, thus leaning to the left end of the Fixed–Flexible dimension. Carla (older Portuguese) illustrates this well: “Since I don’t have any practice with this, it’s better to stand still, not to touch any button. Otherwise, I’ll ruin something here.”

Due to insecurity or fear, this disposition often represents the right end of the attitudinal Indifferent–Vigilant dimension—the analogue mindset avoids being challenged by “new” media technologies and values safety over discovery. This strategy is also an indication of a generational imprint, whereby user patterns established in one’s youth persist in older ages. The established social patterns from the analogue world become imported into the datafied realm. In this vein, Astrid, a retired Swede, explains how she only befriends people on Facebook that she has a social relation with outside of social media: “It’s not just those who know someone I know, but it’s the ones I meet and know,” she explains, putting an emphasis on the offline relationships as a reason for befriending someone online.

Linda, an older Estonian, also represents the Vigilant position, evoked by transferring offline social norms and relationships to the realm of social media, as she is mostly concerned about hurtful online comments: “Well, we’ve got enough people who want to do bad things . . . that the less we expose ourselves [on social media], the better it is. We have a bit too much evil.” The exposure that Linda mentions is mainly, if not exclusively, related to the representational dimension of the datafied world, and rather insensitive to its operational dimensions.

The analogue mindset is a social and mental structure that shapes a way of seeing, imagining, and organizing the world according to how it was in the pre-datafied world when habits and minds were formed in relation to the analogue media during the formative years. These patterns serve as blueprints for setting boundaries and expectations in the digital and datafied space. It does not mean that one entirely excludes the use of smartphones or laptops; rather, one treats them as continuations of the media available in the analogue world. On the Limited–Extended axis, this aspect of the analogue mindset is exemplified by smartphone usage, restricted to treating the device as merely a phone that one can bring with oneself, a phone that is mobile, rather than a multimedia technology that can be used in a variety of ways.

### The Datafied Mindset

At the other end of the continuum, we find the *datafied mindset*. In its purest form, this mindset has fully internalized the logic and dynamics of the digital and datafied media. This mental inclination is sensitive to the fact that subjects, objects, and practices are transformed into digital data and react to both representational and operational metrics—it aligns with the logic of datafied media.

This mindset reveals a willingness to acquire new digital skills and make use of novel applications, resulting in broad online repertoires and diversified patterns of use on the Limited–Extended axis. It also leans to the right end of the Fixed–Flexible dimension as it holds an inclination to learn about how the datafied media landscape works and permeates all facets of life. This transforms into a certain sensibility for the structural conditions under which the data-driven systems govern digital society, and manifests in the realization of the complexities involved and the vocabulary of technological discourse:

It’s actually impossible to say that we read it completely, because it’s not possible. First, there are kilometres of text, then it’s a technical language not accessible to most of us, and besides, we’re not even sure. Unless we check which trackers are included in each webpage, how the applications are set up [. . .]. At the moment, this is part of my job, working to promote digital policies that protect our data and prevent companies from selling them without our consent or, if we consent it because we had no other choice, trying to prevent increasing data vulnerabilities. [. . .]. We really need legislation because education will never be enough. (António, younger Portuguese)

The datafied mindset tends to be suspicious and critical about the business models of social media platforms based on the extraction of data from online media users, representing the right end of the Indifferent–Vigilant dimension. Differently from the analogue mindset, the vigilance of the datafied mindset stems from awareness, not from insecurity or fear. Awareness includes knowledge about the pros and cons of datafication and online surveillance that may lead to analytical reflexivity and deliberation, as we can see in this dialogue

between two participants in the group of older Estonians with higher education:

Valter: But lately, there has been a lot of talk about social media giants, either on their own initiative or indeed on the initiative of some Big Brother—say, the Chinese government or the US government or God knows what government—being able to monitor people, all their activities. That is nothing, but they can shape public opinion very powerfully through social media. A number of public figures have said alarmist things about this. I have my own opinion on that, but if they start to use social media to shape public opinion, for example, to directly influence the election results, then that is evil. But whether social media knows so much or not so much about people, now without their evil intentions, so to speak—I do not know whether that is good or whether it is bad . . .

Interviewer: Yeah, that's such a complicated subject.  
Helmi: Actually, you can look at it from the other side. In fact, it's the robots that are directing the whole thing and controlling and recording. I'm treating it as a global study. [ . . . ] It's a huge amount of data that's sent there. Maybe it could be used in . . . I don't know how. It's actually a tremendous development of the human brain to be able to do it that way. In that sense it's even enjoyable. It's like a whole other aspect, but you can think of it that way. Not that who is so interested in who I am now, but just how is it possible that the whole of humanity is on record somewhere, mapped out, what they did, where they went. In a way it's interesting.

The most explicit manifestations of this mindset in our interview data appear among younger Swedish and Estonian focus groups, in which some well-educated participants, also with professional experience in the field of information technology (IT), had deep insights into the workings of the digital tracking and profiling machinery, as illustrated by Marek (younger Estonian):

Why I don't post, it is because as I teach data and cybersecurity at school, it's part of my job to pass on information about how unsafe the world is. [ . . . ] I've also put a block on my Windows to see what it gets and how it can ever monitor or send information. [ . . . ] But Google and all the other stuff I've kind of shut down what and how it's tracking, because, well, if this data leaks, or your information can be retrieved [ . . . ] Well, let's just say that Facebook and Google are both tracking your activities very nicely as their part-time job, so to speak.

Similarly, to Marek, some other young participants had developed clear sensibilities and strategies for avoiding algorithmic targeting, thus positioning on the right end of the Limited–Extended and Indifferent–Vigilant axes. The strategies included having VPN accounts or programs that block cross-site tracking, using two-step verification procedures, disabling one's phone from using microphones, and mainly using search engines such as DuckDuckGo, a commercial search engine that deletes behavioral data when a user exits the browser.

The vigilant attitude of the datafied mindset may also reveal itself in the ways in which media users intuitively evaluate technological affordances and offers in the digital environment:

I always check like, if [the app] looks serious, so like the presentation, reviews, how many downloads there are. So, if it's something that like looks a little bit unserious and has only few downloads, then I don't download it . . . Then I don't really have so much confidence in that app. But if it's something that has a lot of downloads and looks professional or whatever, then I'm more inclined to trust it too. I guess [laughs] it's not so much like fact-based selection but it's more like gut feeling. (Oscar, younger Swedish)

This young Swede describes the tacit knowledge, the “gut feeling,” that comes from his extensive experience in orienting in the datafied space, being instrumental in evaluating the trustworthiness of systems (in this case apps). This “gut feeling” is an expression of the internalized approach to the datafied world, incorporated into a mindset in the same way as habitus is formed in the Bourdieusian sense. It is not “fact-based,” that is, based on rational evaluation, but on an internalized reaction based on experience. Partly, it is based on representational indicators (“a lot of downloads”) and impressions based on experience (“looks serious,” “looks professional”).

The datafied mindset is, thus, sensitive to operational dimensions of algorithms and metrics that are not immediately visible to the user, but that direct the ways in which the algorithms work. This mindset does not orient exclusively according to the representational dimension of online media, that is, the manifest textual expressions that result from users uploading pictures, texts, and other information about themselves, or the statistical metrics we see on the screen that may guide users' behavior. The datafied mindset also orients in the operational metrics not immediately visible to users, exemplifying how data logic is “written into the mind.” Sensitivity to the operational media metrics as a relevant feature of the datafied mindset can be acquired through professional training, or extensive experience, or a combination of both. The datafied mindset is also open to gaining new knowledge and competences related to datafied media platforms, thus leaning toward the right end on the Fixed–Flexible axis.

## The Pragmatic and Adaptive Stances

The tensional interplay between digital dynamics and analogue resilience in the processual formation of the datafied mindset also manifests in two distinct stances that we labeled as the pragmatic and the adaptive (Figure 1). We see the stances as orientational variations *within* the Analogue–Datafied spectrum, reflecting different ways of coping with datafied society. Many of our participants expressed one or another of these stances.

The *pragmatic stance* illustrates a specific type of response to datafication. It values the benefits involved and recognizes trade-offs but does not express an interest in the affordances and risks of datafication unless it is inevitably necessary. This stance leans, thus, to the left side on the Fixed–Flexible dimension:

Sometimes I notice funny things when I talk near the phone, and some people have also noticed it, but it never gets to the point of making me, trying to understand why, or changing privacy settings. I always think that maybe it's me that finds it strange, and it never leads me to act. [. . .]. There is an intrusion, we give permission without realising it. Or perhaps it was written but we don't read it because it's kilometres of information about privacy policies and therefore I think it's still a very unclear awareness and that leads to little action. (Teresa, younger Portuguese)

This stance may be related to varying degrees of digital experience and engaging with the online world enthusiastically or simply out of necessity. When asked about commercial data collection, Leida (an older Estonian) illustrates the pragmatic stance. While being, in general terms, aware of the mechanism of commercial monitoring, she represents the left end of the Indifferent–Vigilant dimension, with minor ambivalence and doubt:

. . . sometimes you can have so much fun with Hansapost [an online shop]. Well, it's already tracking, really. For example, let's say I was looking at those robot vacuum cleaners, they have them at all prices. I was looking at these 1000-euro ones and so on, and then I get a letter from Hansapost saying that the one you were interested in is much cheaper now. That's when I feel there's surveillance like that. [. . .] So what? Very good of you to say it's cheaper. [. . .] Actually, they must still have this very strong IT crap to be able to sort of look at each person and see what they've wanted to look at or buy. That it gives feedback. But I don't consider it surveillance because it doesn't do me any harm. No, I don't have a fear of it, maybe I should.

The pragmatic stance can be formed in scenarios where individuals experience limited control over ubiquitous commercial surveillance. In several cases, participants from both generation groups expressed resignation combined with normalization, explaining the lack of behavioral changes in response to experiences of dataveillance, and leaning toward the left side of the Fixed–Flexible category.

Normalization of dataveillance and resignation to its inevitability as a dominant trait of the pragmatic stance is well illustrated by two younger Estonians:

- Sille: . . . I know that everything is being monitored, everything is being controlled. I imagine that bank accounts, things, someone somewhere has everything going through filters, things. But the thing is, that's modern life.
- Interviewer: Okay, so you'd rather take it as inevitable, and reconcile. And Sigrid, how is it with you?
- Sigrid: Quite similar, in the sense that I don't leave any data draggle, in that I don't enter codes or . . . or any such sensitive information in suspicious places. But well, all this tracking by Google and this targeted advertising, it doesn't bother me that much. So. . . so yeah, it seems to me that the profit that I get from those platforms is maybe bigger than the damage.

Another variety of the pragmatic stance manifests through an illusory belief that individuals have at least partial control over datafied media. Such understanding also indicates that their heuristics “predate Internet media but are applicable to them” as “datafied media are then judged using the standards that individuals hold for legacy media” (Mathieu & Hartley-Møller, 2021, p. 7). Marta (younger Portuguese) illustrates this variety of the pragmatic stance:

It's for commercial purposes, so we have a saying. I can always say I don't want to buy this; I don't want to consume this and so they can try to sell me something, but I feel that the last word is on my side.

The *adaptive stance* acts from a position of interest and openness toward digital media and the datafied world. It holds an investigative and explorative approach to the datafied landscape and adjusts to its contours. In falling predominantly to the right side of the Fixed–Flexible dimension, this mental inclination is agile and aims to expand its possibilities of apprehending how the datafied world operates. Valter (an older Estonian) admits:

I'd wish to have a much better command of all the social media platforms—yet Facebook. Then, let's say, an internet platform, too, if only Google Maps. Or all the others, so that I wouldn't be so clumsy. So that I would be many times better oriented in the subtleties of what they actually offer.

Although often restrained by habits and practices established by social norms of the offline world and analogue media, the adaptive stance is motivated to keep up with times. In this vein, an interesting case is Mona, a retired Swede, who tells about her struggles to have her partner adjust to the digital and datafied world. When answering the question if she herself uses parking apps, she retells how she helps her partner, who seems less well versed with the smartphone:

- Mona: Yes, I do. But as I said, my partner can't pay by card either. [. . .] But then, if he goes to town, I can start the parking, when I know where he's going to park.
- Interviewer: Yes, it's nice that you can do it remotely.
- Mona: Yes. He usually parks in the same place, so then I know that I can start when he gets there, and then I end it when he gets home. Of course, it's more expensive, but . . .

Mona is adaptive and reveals a diversity of practices in using digital media that positions her on the right side of the Limited–Extended category. She finds out ways to manage on the part of her less technologically savvy partner, who represents the analogue mindset and the left-most side of the Limited–Extended and Fixed–Flexible dimensions, as he, at least according to Mona, cannot manage either credit cards or mobile phone apps and is reluctant to acquire those skills.

The adaptive stance is, nevertheless, defined, or limited, by its structural constraints that shape a way of acknowledging the world according to how it was structured in analogue times. Luísa (an older Portuguese) provides an illustration:

I put very few likes. I mean, they would have to analyse . . . it had to be a person that, in my opinion, that uses it so much, so that they could discover someone's preferences. In my case, I think that it is not possible because I don't give them that much data or so for some statistics or something important for them. [. . .] If we close the doors of the house, we also need to close the doors of the virtual or vice versa [. . .] because the more open we leave them, the easier it is for others to enter in our virtual and physical space.

In her references to non-digital ways of acting, she also clearly indicates the ways in which she situates and tries to understand the datafied world with a reference to the analogue one. She also holds a cautionary behavior online indicative of the vigilant end of the attitudinal dimension.

Similarly, André (a younger Portuguese) is challenged by the datafication of everyday life. While his behavior is also indicative of the right end of the Indifferent–Vigilant dimension, he integrates digital dynamics in an analogue explanatory model:

I stopped using social networks in a conscious and deliberate manner, because I felt that it was too addictive and I [. . .] didn't want to support a business model that I didn't appreciate. [. . .]. Now I use Facebook very rarely. I use Instagram because it gives me great pleasure, but I publish only stories that are deleted after 24 hours [. . .]. I rarely post photos on my feed. Only if it's related to a trip or something very specific.

In being critical of “platform capitalism” (Srnicek, 2017) and limiting his online activities by only posting short-lived stories, André, on the one hand, makes an effort to minimize the representative tracks he leaves online. On the other hand, he fails to recognize the operational data that his online actions

result in, which means that he nurtures his social, but not his institutional privacy and integrity (Young & Quan-Haase, 2013). André, furthermore, represents one of the few cases where both types of reasoning, the analogue and the datafied, were applied depending on the context of the datafied media (in this case, different social media platforms).

As we showed, the pragmatic and the adaptive stances represent different sets of resources—specific skills, practices, and reasonings—to navigate the datafied media space. Taken together, these sets point to the ambivalences in approaches to the ubiquitous datafied world in which the datafied mindset is developing.

The analysis of our material led us to build a model (Figure 1) explaining how the datafied media logic interacts with media users' mindsets, stances, and social actions. The model illustrates the layers and nuances involved in the interplay between digital dynamics and analogue resilience in the process of the formation of the datafied mindset.

## Conclusion

This article has offered a theoretical–analytical discussion and modeling of mindsets by exploring how experiences with pre-datafied media influence ways of relating to the datafied media landscape, as expressed in interviews with media users of two different generational cohorts in three countries. To do it, and as a result of our empirical material, we suggested an analytical model built on the tension between the analogue and the datafied mindset as a heuristic framework of analysis.

First, we could outline the contours of the datafied mindset as a disposition to act in the datafied world. We found its clearest expression among the focus groups of young participants, mainly academically trained Swedes and Estonians, some of whom also worked in the fields of digital media and communication, or IT. Even those focus groups, however, manifested indications of what we have called the analogue mindset. Furthermore, the datafied mindset was expressed among some of the young people we interviewed, but it was far from being shared by all of them. Although the analogue legacy “written into the mind” remained dominant in the older group, we could find some older interviewees who clearly displayed indications of the datafied mindset, or the adaptive or the pragmatic stance to the datafied world. We can conclude that manifestations of the analogue and the datafied mindsets were found among both generational cohorts. We, thus, suggest that our findings offer a novel contribution to the media generations theory, and add some nuances and complexity to counter over-simplifications such as the dichotomy of “digital natives” versus “digital immigrants.”

Second, we argue that the analogue and the datafied mindsets, being ideal-typical constructs, are not bound to individuals, and the same person can display characteristics of both the analogue and the datafied mindset in relation to different parts of the datafied world. The analogue and the datafied can, thus, be considered facets of contemporary mindsets as they are multi-dimensional and formed by



contrasting understandings of the digital and datafied space. This tensional interplay between digital dynamics and analogue resilience is captured by the pragmatic and the adaptive stances. All stances and mindsets represent qualitatively different perceptions of the datafied media, which impact dispositions to act in the datafied social space. Although the two mindsets may conflict with each other, we suggest that one mindset does not replace the other, but rather adds another layer to the social action of individuals among which they can be found.

Third, we suggest that the datafied mindset is a disposition to act in a datafied social space where the tenacious structures of the analogue world linger on—despite the ubiquitous presence of the digital over several decades (see, for instance, Markham, 2020). Hence, we argue that digital developments are mostly integrated into an analogue explanatory model that fits existing social norms. This understanding structures the possibilities to learn about the structural conditions of the online world and thus works against acting according to the logic of the datafied space. Noteworthy, we found no significant cross-cultural differences in our study. Similarities between the countries were stronger than differences, leading us to suggest that the analogue–datafied mindset continuum as an analytical construct is applicable in various cultural contexts. This can be explained by the fact that the datafied media are designed to work a-contextually, thus playing out in similar ways, independently of the individuals' cultural contexts. This hypothesis is worth exploring in future research.

Finally, we suggest that our analytical model contributes a complementary approach to “digital literacy” and similar concepts. We showed that features of the datafied mindset, for instance, sensitivity to the operational media metrics, can be acquired through advanced professional training, or extensive experience, or a combination of both. Thus, in addition to the concept of “digital skills” that are fostered through educational efforts (and can be forgotten if no longer needed), we propose the concept of datafied mindset as a more deeply internalized structure and highlight its non-institutionalized formation.

The main limitation of our study lies in its relatively small and non-representative sample and purely exploratory qualitative approach. This limitation is alleviated, to some extent, by surprisingly sculptured thought patterns, manifest in three different cultural contexts. The suggested analytical model and concepts, hence, may serve as a basis for further studies, both qualitative and quantitative, and for validation and elaboration.

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