

Reimagining | 20 Digital Well-Being | 24

Report for Designers & Policymakers



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The background of the page is an abstract, low-poly geometric pattern. It features various shades of red, pink, and blue, forming sharp, angular shapes that resemble stylized leaves or crystals. The colors transition from lighter pinks and reds at the top to darker blues and purples at the bottom. A large white rectangular area is centered on the page, containing the main text.

“This report aims to offer a holistic view of the future of digital well-being, one that will inspire the next generation of designers of online tools and policymakers who will regulate these tools.”

Matthew J. Dennis & Daan Annemans

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Executive Summary

This report aims to offer insights into cutting-edge research on digital well-being. Many of these insights come from a 2-day academic-impact event, *The Future of Digital Well-Being*, hosted by a team of researchers working with the Royal Netherlands Academy of Arts and Sciences (KNAW) in February 2024.

Today, achieving and maintaining well-being in the face of online technologies is a multifaceted challenge that we believe requires using theoretical resources of different research disciplines. This report explores diverse perspectives on how digital well-being can be actively cultivated, while also emphasising the importance of considering individual differences, societal contexts, and nuanced cultural factors. We aim to offer a holistic view of the future of digital well-being, one that will inspire the next generation of designers of online tools, as well as policymakers who will regulate these tools.

We start by asking what digital well-being is – how we can best define a concept that is used by diverse stakeholders and researchers from many disciplines in various ways. To do this, we explore the classic ethical theories of well-being, showing

how they can give us insights into how the term digital well-being is currently deployed.

We then move to look at the existing strategies that have been proposed to actively cultivate digital well-being, exploring the business models that threaten digital well-being and the relative advantages of the digital and non-digital solutions that are currently proposed. On the one hand, digital tools – such as Apple’s Screen Time and app blockers such as Opal and Forest – integrate seamlessly with the digital lifestyles of users. They also create precise metrics for digital well-being, which facilitates their solutions to reduce screen time. On the other hand, non-digital solutions, including mindfulness practices, digital detoxes, and digital well-being coaching, offer a new set of tools to reconnect individuals to their natural rhythms and help to actively promote offline activities.

We then move to discuss diversity and how various groups of users have strikingly different digital well-being needs. Embracing neurodiversity in digital well-being is crucial as it strongly impacts the users’ experience of online technolo-



gies. When designing for diversity, organisations and designers alike need to prioritise customization for people with physical disabilities, mitigate harmful content for users with mental well-being conditions, address gender stereotypes and online harassment, and be designed in ways that recognize the very real risks of online technologies.

This report closes by examining cultural differences. We believe that non-Western conceptions of well-being offer rich sources for enhancing digital well-being insofar as these traditions can inform and inspire the designers of future online technologies. We focus on East-Asian and South-Asian traditions, although in further work we recognise it would be useful to investigate conceptions of well-being that are influential in the Gulf region, Africa, and South America. Each of these areas have ethical frameworks

that discuss well-being in depth as well as a rich cultural heritage.

In conclusion, this report's insights underscore the imperative of recognizing diversity in digital well-being, both in terms of cultural contexts and disciplinary perspectives. It emphasises the need for culturally responsive design methodologies and the integration of non-Western philosophical perspectives into current digital well-being research. Embracing this diversity, we believe, offers the best chance to create digital environments that prioritise well-being for users and the societies they live in across the world. Ultimately, we believe that it is not only about designing better online products; it's about shaping a digital landscape that promotes well-being and flourishing for everyone.

Introduction

Digital well-being has become an increasingly important topic for researchers from diverse academic disciplines over the last fifteen years. Philosophers, digital anthropologists, communication scientists, human-technology interaction (HTI) researchers, and legal scholars have all tried to explain a widespread feeling that digital technologies have taken over key aspects of our practical lives. For example, the amount of time we spend looking at the screens of our mobile devices has exponentially increased. We are required to be digitally connected for so many tasks in everyday life, and yet how online technologies affect us – especially detrimentally – is only just starting to receive systematic and dedicated research attention. This research has many important foci, although a key set of concerns surrounding what is now termed “digital well-being” has emerged. The aim of this

report is to provide an overview of cutting-edge academic research and industry initiatives on this topic.

Online connectedness enabled many of us to remotely work, educate, communicate, and entertain ourselves throughout the Covid-19 pandemic in 2020–21. Much of the digital infrastructure (and many of the cultural precedents) that emerged during this time show every sign of remaining an integral part of 21st century life (Dennis et al. 2023). Much of this was positive, especially in ways that are frequently framed using the term “well-being”, although not “digital well-being” specifically. Few white-collar workers would want to return to a five-day commute, nor would they want to go to the office every working day. Nevertheless, the integration of online technologies in the home has simultaneously left many



of us feeling burnt out, increasingly distracted, and even nostalgic for aspects of pre-pandemic life.

Tracking the surge of academic interest in digital well-being over the last decade, the topic has received a rise in media and industry attention since around 2017. Each of the major tech companies published web pages on how to use their products in accordance with digital well-being principles from around 2018 onwards (Dennis 2021). For example, Google hosts <https://wellbeing.google/> which offers a variety of tools, tips, assessments, and visualisations of one's technology use, with the motto "Find a balance with technology that feels right for you." These kinds of responses by tech companies were precipitated by many popular articles which regularly ask: "How do digital technologies affect us?," "How can we fight online distraction?," "How can children be protected from a tsunami of – soon to be algorithmically produced – online content?" Such media attention has made digital well-being into a household term, one that is a reference point for heated debates in homes, schools, workplaces, as well as in the legislative chambers of policymakers.

From discussions about how much screen time teenagers should have before they go to bed, to discussion of the contractual right of employees to be out-of-the-office outside of working hours, to concerns relating to how to legislate for better digital well-being, concerns with the effect of online technologies on our practical lives are everywhere. The European Union's Digital Services Act and the AI Act have also provisions to put some of these concerns into European law, although they do not use the term "digital well-being" specifically, as they focus on restricting the widespread deployment of persuasive technologies.

In this report, we share cutting-edge research insights on digital well-being by uniting the perspectives of academic researchers, policymakers, and industry experts to tackle what we regard as the key emerging frontiers in what is still a rapidly changing debate. This report is a combined effort of many of today's experts in the debate on how to improve digital well-being, but we have ensured that non-academic stakeholders are also heard.



1. What is Digital Well-Being?

1.1. Defining Digital Well-Being

Digital well-being has become a vital part of everyday life. We all seem to have an intuitive idea of what digital well-being is, whether this is about the time you spend on your smartphone, your relationship with technology in general, or how your online habits affect your physical health. However, there is no universally agreed-upon definition within the academic literature. This means that researchers from various disciplinary perspectives may find themselves adapting the concept to fit their own research trajectory or study goals. At face value, the various definitions of digital well-being may seem compatible, but there are essential differences which we believe have theoretical and practical repercussions.

At the theoretical level, conceptual differences between definitions of digital well-being naturally lead to different research outcomes. Nevertheless, when the research findings on digital well-being are presented side by side the fact that they are using different concepts of digital well-being can be obscured. This can result in conceptual confusion or inconclusive findings, hindering productive trans- and interdisciplinary dialogue. On a practical level, different conceptualizations of digital well-being also cause variations in how the concept is implemented. As a result, the diverse and sometimes fragmented literature on digital well-being proposes a wide variety of recommendations for promoting digital well-being that guide design choices and policy guidelines. So, to foster an

interdisciplinary and (ideally) transdisciplinary dialogue about digital well-being, it is essential to understand precisely what each discipline means when they talk about 'digital well-being'.

The most cited definition of digital well-being within philosophical literature is the definition provided by Luciano Floridi & Christopher Burr, who define digital well-being as:

“The project of studying the impact that digital technologies, such as social media, smartphones, and AI, have had on our well-being and our self-understanding of what it means to live a life that is good for us in an increasingly digital society.” (Floridi & Burr, 2020: 3).


This definition does not require a commitment to a specific theory of well-being but rather defines digital well-being as studying the impact of digital technologies on well-being and self-understanding of well-being in the digital context. Guy Fletcher further clarifies this when he says that he understands “digital well-being to mean the impact of digital technologies upon well-being as opposed to some specific dimension of well-being.” (cited in Floridi & Burr, 2020: 6). In Floridi & Burr’s definition, then, digital well-being is simply the impact of digital technologies

on one’s well-being (such as one’s mental or physical well-being). Studies based on this definition seek insights into how digital technologies affect well-being.

Empirical research in the field of digital media studies has not always been able to establish clear associations between the effects of digital media on well-being (Orben & Przybylski, 2019). Perhaps because of these inconclusive results, communication scientists and sociologists have thought it is better to ask users directly, conceptualising digital well-being as a subjective experiential state. Viewing things in this way means that digital well-being is regarded as a constitutive part of well-being, rather than the impact technology has on well-being. Vanden Abeele’s influential definition captures this when she says that digital well-being is:

“An experiential state of optimal balance between connectivity and disconnectivity that is contingent upon a constellation of person-, device- and context-specific factors “that can be achieved” when experiencing maximal controlled pleasure and functional support, together with minimal loss of control and functional impairment.”

(Vanden Abeele, 2021: 938).



“The project of studying the impact that digital technologies, such as social media, smartphones, and AI, have had on our well-being and our self-understanding of what it means to live a life that is good for us in an increasingly digital society.”

Floridi & Burr, 2020: 3

This definition of digital well-being focuses on the first-personal experience of using technology, focusing on pleasure and user autonomy. Similarly, communication scientist Büchi also uses a definition that emphasises the primacy of a user’s first-personal perspective, writing that digital well-being is an “individuals’ subjective well-being in a social environment where digital media are omnipresent.” (Büchi, 2021: 173). Like Vanden Abeele, he also provides a working defi-

nition as “individuals’ affect (i.e. positive emotions), domain satisfaction (e.g. one’s relationships or job), and overall life satisfaction in a social environment characterized by the constant abundance of digital media use options.” (Büchi, 2021: 174). This definition of digital well-being has an affinity with what philosophers call ‘desire-fulfilment’ theories of well-being, where well-being is defined in terms of attaining the things a person wants.

Within HCI and computer science, there is also a strong focus on subjective theories of well-being, often focused on the feeling of autonomy or control (see Calvo & Peters 2014, 2013). Recently, Lyngs has defined digital well-being as the “extent to which the user thinks their digital device use is well-aligned with their personal, valued, long-term goals. That is, the

user’s feeling of control over their device use is central to their digital well-being, with the added constraint that device use must be well aligned with their long-term goals.” (Lyngs, 2019: 1). Once again, this definition can be interpreted as a form of a desire-fulfillment theory that distinguishes the value of personal long-term goals from other desires.

“An experiential state of optimal balance between connectivity and disconnectivity that is contingent upon a constellation of person-, device- and context-specific factors “that can be achieved” when experiencing maximal controlled pleasure and functional support, together with minimal loss of control and functional impairment.”

Vanden Abeele, 2021: 938



1.2. Strategies for Digital Well-Being

In a digital society, the way we interact with technology fundamentally shapes the way we live, work and connect. While the rapid advancement of digital technologies over the last two decades has undoubtedly brought about unprecedented opportunities, this has been accompanied by a series of challenges. In this context, a central question arises: How can we ensure that technological innovation serves our real interests and consistently promotes our well-being? And, importantly: Who is responsible for getting us there?

“Sustainable solutions based on innovation can create a more resilient world only if that innovation is focused on the health and well-being of its inhabitants. And it is at that point – where technology and human needs intersect – that we will find meaningful innovation.”

(Frans van Houten, former CEO of Philips)

A growing number of governments, organisations and individuals have started exploring how digital technologies can

be designed, developed, and deployed in a responsible and human-centred way. Regulation (i.e. ESG, GDPR) has been instrumental in holding businesses accountable for the social and environmental impact of their actions. Nevertheless, as technology’s role in our lives and the capabilities of artificial intelligence continue to expand, mere compliance might not go far enough. As technological progress increasingly outpaces legislation, we need an intentional, comprehensive, and collective effort from a range of actors to ensure that technological development genuinely aligns with and supports human values and societal needs.

Organisations have a unique position in this ecosystem. They have the power to directly influence how technology integrates with and impacts our daily lives, highlighting their responsibility and opportunity to guide the development of technology in a way that promotes well-being. As the boundaries between on- and offline become increasingly blurred (Floridi 2015), this responsibility does not only apply to tech companies

that create the digital products we use daily, but extends to every organisation operating in a digital society. We need to understand how organisations in a digital society can capture value in a way that promotes individual well-being and social resilience.

As mentioned above, the term “digital well-being” has been defined in various ways, although it can perhaps be most usefully applied to understand the effect of digital technologies on our well-being. Moving towards business models that support digital well-being and encouraging considerations of digital well-being in the development of products and services requires time, energy, and the coming together of different actors. It starts with an honest assessment of how and where current business models fail to protect – and in some cases even harm – their users’ physical and mental well-being. To encourage organisations to make digital well-being a factor in the development of products and services, scientific insights and theoretical concepts will need to be operationalised into actionable and measurable business practices. Furthermore, we will need to propose ideas for the metrics and data that will facilitate this process. To accelerate this transformation, businesses can draw inspiration from a variety of existing frameworks (i.e.

Corporate Social Responsibility, ESG and Corporate Digital Responsibility) which advocate for sustainable, ethical, and socially responsible business practices. Human-centred design frameworks and approaches can help businesses understand how to embed digital well-being considerations at the earliest stages of product and service development, ensuring that digital solutions are created with the end user’s well-being from the outset.

Awareness of the importance of digital well-being and sustainable innovation is growing. In the coming years, organisations will face increasing pressure from various social actors to adopt practices that protect the well-being of the individuals, organisations and communities that are impacted by their activities. Embedding digital well-being at the heart of business models is therefore more than a matter of social responsibility, but a strategic imperative for future-proofing their business. By prioritising digital well-being within their strategic and operational frameworks, companies can become key players in shaping a digital landscape that enhances, rather than detracts from, human welfare.

2. Solutions for Digital Well-Being: Digital or Non-Digital?

2.1. Digital Solutions to Digital Well-Being

New digital solutions have been created in recent years in response to a growing market demand for digital well-being. These initiatives recognise that a large majority of the world's active population spends a significant portion of their day interacting with digital devices—an estimated 70% of their waking hours. Therefore, solutions that integrate seamlessly with these technologies have become crucial.

Prompted by concerns from parents and policymakers, Apple introduced Screen Time on iPhones with iOS12 (2018), closely followed by Google's digital well-being initiative for Android devices.

These settings, now available to billions of device users, were primarily designed for parental control, offering a basic level of market education about digital well-being. Despite their wide reach, however, these tools have some limitations. For example, they do not cater to the individual needs of specific segments of users, such as students and professionals, and are often seen as ineffective (users override them) and complex to set up. Additionally, they can only promote a partial view of a user's digital well-being, as they are based on elementary metrics such as the total daily time spent on devices and individual apps.

Going forward, it is important to question whether Apple and Google can develop





“To align technology with humanity’s best interests”

The Humane Tech Foundation’s mission

truly effective digital well-being solutions based on their current frameworks. Some have argued that their business models are closely tied to what has become known as the “attention economy” because the valuable data generated from users creates a potential conflict of interest. In response, smaller companies have developed alternative digital tools aimed at improving digital well-being. These include app blockers such as ‘Opal’ and community-driven apps such as ‘Forest’, which use gamification to encourage focused work or digital detox sessions. Various ‘dumb phones’ have been released including the ‘Light Phone’ which can offer many of the functionalities of a smartphone while reducing the risk for distraction, and new ‘screen-less’ hardware devices such as the Humane AI

pin which rely on the premise that digital technology does not need a screen to be effective. We believe these devices may have a role in the improvement of digital well-being in the future.

“To align technology with humanity’s best interests”

The Humane Tech Foundation’s mission.

The ongoing evolution in digital solutions represents a crucial recognition: by redesigning our digital tools with well-being in mind, we can transform the nature of our interactions with digital devices from potentially harmful to beneficial. We see two promising trends for the future development of digital well-being solutions: the ability to accurately measure digital well-being and the integration of real-time

nudges and interventions to promote mindful technology use.

First, while the measurement of digital well-being has been mentioned in this report, digital well-being solutions provide valuable resources for applied research, helping to establish and refine measurement standards. These tools, already assimilated into users' daily lives, facilitate the recruitment of large participant panels. As a result, the presence of these tools allows for the opt-in collection of a wide range of data, including screen time, user habits, and survey responses.

Second, the potential of digital solutions extends beyond simple app blocking, gamification or alternative hardware. Building on insights from cognitive behavioural therapy, particularly in the use of nudges, these tools can encourage behaviours that align with users' larger concerns with well-being. This approach helps mitigate the compulsive aspects of digital usage by prompting users towards healthier interaction patterns with technology. As a result, these trends signal a shift towards more sophisticated, research-based interventions that could significantly improve our relationship with technology.



2.2. Non-Digital Solutions to Digital Well-Being


As we have seen, the 24/7 connected lifestyle induced by digital technology presents multiple well-being challenges, including the feeling of being overwhelmed, anxiety, lack of focus, and FOMO, which are widely covered in academic research. Some have argued that it could seem paradoxical that most emerging solutions to the problems created by technology are tech-based (for example, blocking apps that limit screen time). Some groups propose non-digital solutions as a remedy to today's digital well-being crisis.

We have seen that, while technology provides pleasure, entertainment, and support, it can also lead to stress, conflict, and a loss of control. This ambivalence demands giving more control to an individual – something that standard technology software cannot do. For instance, if a person scores low on conscientiousness and high on impulsivity on the BIG 5 psychological tests, a blocking app would be helpful for them. However, a person with the opposite characteristics might actually need their phone as a quick distraction to unwind from a highly focused task because they can easily go back to their work. When deprived, they do not take breaks and are likely to burn

themselves out (Mark, 2023). Research suggests that blocking apps promoting the idea of “taming” technology work well for people who are most susceptible to getting addicted, and have ADHD or similar conditions.

The second issue with tech-led responses to the digital well-being problem is that tech solutions can replace human self-regulation and our sense of autonomy. Rather than developing our ability to stay focused or the interoceptive awareness of our bodies, we start relying on the app to help us focus or to tell us when to stand up. This arguably doesn't help the agency of the users, or as Bandura puts it: “the human capability to influence one's functioning and the course of events by one's actions” (Bandura, 2017). Much research links agency and the ability to be in control of well-being, productivity, etc. Internal research by Consciously Digital, for example, shows the conscious use of technology and the sense of agency and feeling in control are the key factors predicting digital well-being and are highly correlated with overall well-being.

The third issue with the tech solutions to the digital well-being problem is that the subjective experience of technology usage often outweighs objective behavioural measures in predicting



“Achieving digital well-being requires a holistic approach that addresses the multifaceted nature of the human experience.”

Anastasia Dedyukhina

well-being outcomes. For example, individuals’ feelings of being “always on” have a significant impact on mental fatigue. In other words, when addressing challenges related to digital well-being, it’s important to consider subjective experiences, individual differences, and environmental factors such as work demands and societal norms and use the tailored approach (Abeele, 2021). What is a healthy (digital) diet for one person is not necessarily a healthy diet for another one. However, tech solutions do not provide these nuanced approaches, as they aim to measure standardised parameters like the duration of screen time.

The overall non-digital solution framework to the digital well-being challenge can be formulated as helping a person reconnect with their natural rhythms through awareness and engaging the prefrontal cortex, as opposed to the automatic “limbic system” reactions driven by dopamine, etc.

Digital well-being coaching has a key part to play here as it helps make people aware of their patterns and then change them consciously (ICF Thought Leadership Institute, 2024). An important benefit of coaching is that it encourages agency in the clients, without offering answers,

and instead guiding the client to look for their own tailored solutions, in line with their values. This allows coaching to be an efficient solution to the digital well-being problem. By understanding the big “why”, coaches help clients make subtle changes to their “digital diets”, such as establishing clear boundaries. This may involve setting designated times for checking emails and social media, as well as creating tech-free zones in the home or workplace to promote offline activities and social interactions. They also help clients recognize and talk through heavy feelings like guilt and feelings of failure that can arise from smartphone use and mindless scrolling (especially in individuals with low self-control), impacting well-being.

Mindfulness and meditation are popular solutions to the problems caused by the 24/7 digital lifestyle. It has been shown both to develop greater awareness and have a positive impact on interoception and overall well-being by reducing stress and enhancing self-regulation. Digital detoxes are becoming another popular solution, ranging from daily “tech-free

hour” to “digital sabbath”, to organised tours or renting remote cabins being offered to “reclaim one’s attention”. While they increase awareness temporarily, the complexity of human relationships with technology after returning to the real world makes it difficult to keep the good of the digital detox afterwards for many participants. A new form of digital detox is movements by parents (Spain, UK), who unite to agree on a phone-free childhood for their children.

Other non-digital solutions involve activities that require a “slowing” lifestyle and are becoming increasingly popular, i.e. yoga, craft, natural walks and outdoor time, board games, as well as self-care practices such as relaxation, restorative sleep and healthy eating. These allow people to develop resilience and cope better with the stresses of modern life, including those induced by digital technology.

Ultimately, achieving digital well-being requires a holistic approach that addresses the multifaceted nature of the human experience.

3. Digital Well-Being for Diverse People

3.1. Diversity and Digital Technologies

Digital well-being varies among individuals due to the diverse characteristics, backgrounds, and abilities each of these individuals possess. Embracing diversity is not only an ethical imperative but an opportunity. Responsibly designed technologies have the potential to promote diversity or cater to it exceptionally well.

Figure 1 outlines key aspects of diversity to consider for all users, including those excluded thus far. The inner circle addresses individual factors, while the

outer ring looks at societal perspectives, emphasising their interconnectedness. For example, race and gender are inseparable from broader social contexts.

It is essential to recognize that Figure 1 provides only a simplified overview of complex issues. Categories cannot be considered in isolation; rather, the concept of “intersectionality” underscores how various forms of discrimination intersect. Each aspect can be further nuanced in numerous ways. Here, we focus on physical and mental well-being, gender and sexual orientation.



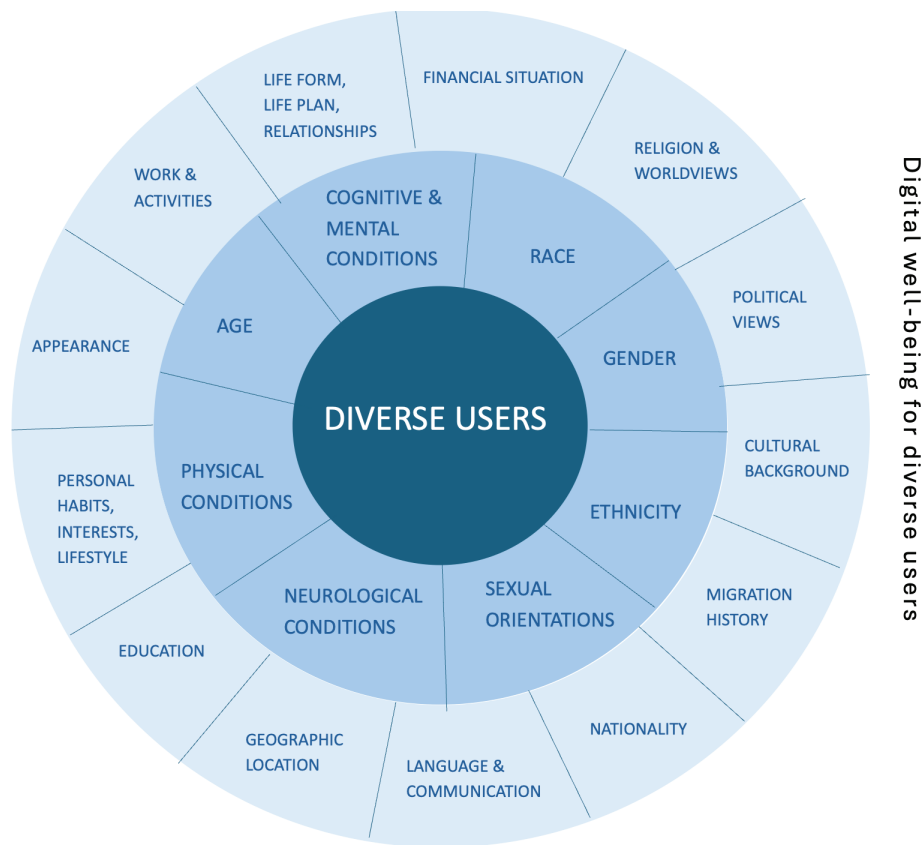


Figure 1: Digital well-being for diverse users¹

3.2. Designing for Diversity

Physical Disabilities

Designers and developers must recognize the diverse needs of users with physical disabilities by prioritising customization. Platforms should support various screen sizes, and screen readers, and provide ample captioning for video content. Interfaces should allow for easy customization of button size, font size, layout, and colour contrast to enhance accessibility for all users.

Mental Well-Being

Designing digital platforms for mental well-being presents unique challenges due to diverse and comorbid conditions. There is a lack of guidelines, despite the global rise in mental well-being issues. Understanding how content can be harmful to people with mental illnesses is crucial to avoid triggers. Especially for people engaging in self-destructive behaviour, social media algorithms can amplify issues through the repetitive presentation of harmful content. A compre-

1. We created this figure in reference to/based on the figure "4 Layers of Diversity after Gardenswartz, L. and Rowe, A. (2003): Diverse Teams at Work. Society for Human Resource Management" and its adaption by Iber and Pauser <https://personalwesen.univie.ac.at/en/culture-equality/diversity/what-is-diversity-about/>, which we have significantly modified.

hensive approach involving technology and collaboration between developers, mental health professionals, and affected communities is necessary. Prioritising user safety fosters a supportive online environment for all.

Gender Stereotypes

Particularly image-based social media platforms such as TikTok and Instagram reinforce gender-normed body images and contribute to societal beauty ideals. Filter apps further exacerbate these norms, with increased social media usage being associated with body dysmorphic symptoms (Gupta et al., 2023; Laughter et al., 2023). A summary by Ward & Grower (2020) underscores the role of social media in perpetuating gender stereotypes among children and adolescents. These gendered stereotypes manifest in online hate comments. Previous studies have shown that female MPs in the UK were particularly targeted on Twitter, resulting in female MPs standing down before the General Elections in 2019 (Esposito & Breeze, 2022; Scott, 2019). In other words, hate comments and online harassment can be a threat to democratic processes.

Social Media is a Double-Edged Sword

Social media serves as a double-edged sword. It provides marginalised groups

with avenues to connect and build communities, offering support to individuals' well-being. However, previous studies have shown that online communities can help adolescents to strengthen their queer identity and feel connected, while simultaneously putting them at risk of marginalisation (Hanckel & Morris, 2013; Miller, 2017; Walker & DeVito, 2020). Similarly, increased screen time may exacerbate issues like body dysmorphia, while reducing it could lead to social isolation and decreasing social support, contributing to loneliness. Digital platforms must prevent ableism and other forms of discrimination while fostering inclusive and safe spaces for all users.

3.2. Strategies for Diversity

Embracing diversity within technology necessitates several key approaches, outlined in Figure 2.

Diverse Data Sets

Ensure the diversity of data sets and adopt sensitive data collection methods. Move away from binary data and standardised surveys toward alternative methods that afford respondents greater freedom to articulate their perspectives and experiences.

Empirical Studies

More empirical research is needed to safeguard digital well-being across diverse people. Identify marginalised user groups and enhance understanding of individual technology experiences.

Diverse teams

Ensure diversity within teams at all organisational levels, from design and development to executive leadership. This diversity encompasses individuals from a wide range of backgrounds.

Diverse Design

Actively incorporate user diversity into design processes. This extends beyond app design to consider the development of complementary tools and devices that support users with disabilities in utilising the app effectively.

Co-Creation

Make co-creation integral to the design of new technologies, involving diverse people in the prototyping and testing phases. Collaboration is essential for understanding how content impacts individuals and for establishing guidelines to inform long-term policy regulations.

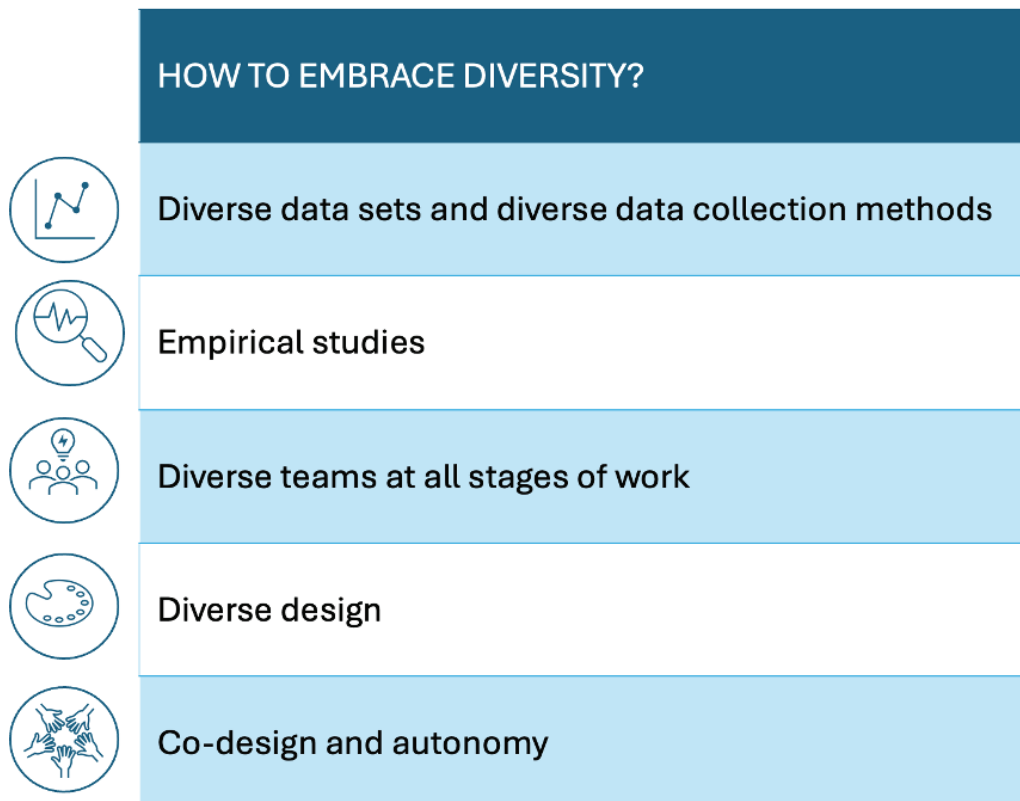


Figure 2: How to embrace diversity?



4. Non-Western Perspectives on Digital Well-Being

4.1. Cultural Insights from an Indian Perspective

As more people gain access to the internet and are online, they bring with them their cultural defaults, behaviours and expectations of the digital products they interact with. What may be easy to use, trustworthy or even a great design choice for one set of people, may not be so in another cultural context. These could lead to unintended consequences and frequent harm online. In his book *Cross-Cultural Design*, Senongo Akpem (2020) states that despite the globalised reality of technology, many cultures are left out.

“We use imagery, typography, and taxonomies familiar to us, without researching their impact in other cultures and languages. Those of us in WEIRD (white, educated, industrialised, rich, democratic) countries treat the web as an extension of our own lived experiences” (Akpem, 2020).

Super apps, for instance, are widely used in China and India, but do not have many users in the West. This makes it important to use a design methodology that is culturally responsive and attuned to what culturally diverse audiences require. Evidence also suggests that cultural factors play a significant role in a range of digital

experiences for users, including impact on inclusion programs, cybersecurity, deceptive design practices, financial decisions, etc.

For instance, research on the diverse harms caused by deceptive design practices shows that cultural factors, including linguistic diversity, location, and social proofing, are crucial in shaping digital interactions for users. Just as researchers in the fields of privacy and HCI use cultural factors to define ways in which interfaces can be made more secure or usable (e.g., frameworks for designing for low-literacy users or frameworks for designing for small linguistic groups), we suggest that researchers in the fields of digital well-being may also benefit from using these studies as probes. By supplementing empirical studies on digital well-being with rich normative conceptions of well-being that draw from diverse cultural and philosophical systems, a more comprehensive understanding can be achieved. Research on user behaviour on platforms such as WhatsApp shows the strong role of social communities and groups in South Asia, including how WhatsApp groups are becoming tools for maintaining and fostering intergenerational ties and family networks, not limited to geography. WhatsApp Groups are often more popular than one-to-one

communication, reflecting a country with strong community and intergenerational bonds. An average user in India is a part of multiple family and community groups, often with members across three generations. Such instances of digital use mediated by culture can significantly impact well-being. Similarly, WhatsApp's use transcends personal communication and has become a key business tool for SMBs in India, making India a successful market for WhatsApp for business. Online wellness coaching, a service which became popular in India during the COVID-19 pandemic, includes digital health and wellness through a personalised coach often using techniques from a diverse set of well-being practices. Diverse users, therefore have diverse use cases for the same digital product, face diverse, often unintended harms from them, and might seek different kinds of well-being from these experiences.

The field of well-being has also evolved to accommodate these differences and draw upon the rich diversity of philosophical and lived experiences beyond the West. Theories of development and well-being have expanded over the years to include factors such as interconnectedness, the role of community-building, interdependence, and ecological aspects of human flourishing. Non-western con-

ceptions of well-being, therefore, are a rich source of new philosophical ways of thinking about how digital well-being can be facilitated and pursued as a goal. These could include looking at disciplines such as Yoga, which has become a major source of foundational knowledge behind meditation apps, and other well-being products which include meditation and mindfulness practices, along with asanas (physical postures), pranayama (breathing techniques) and dhyana (meditation) practices. For companies, understanding users in different regions from their contexts can help expand their business to new markets in value-creating ways, and address the much touted 'next billion users' (Arora 2019). Moreover, as the internet grows more diverse, value in dig-

ital products will be found in addressing pain points, or specific and recurring user problems, and creating well-being for new users from their standpoint. This is how research focussed on non-western conceptions of well-being can impact how the world experiences and understands wellness, and how this conception can inform the design of digital environments. By investigating conceptions of well-being from Yoga, Ayurveda, Buddhism and other non-western philosophical systems, we can build products and services which also offer diversity to users seeking well-being in the digital world. These can then inform practices not just in South Asia, but across the globe, making digital offerings a global force for healthy cultural exchange.





4.2. Digital Well-Being from a Buddhist Perspective

Contemporary digital well-being technologies often draw inspiration from Buddhist notions of well-being, integrating concepts like mindfulness into their design. Applications such as Mitra, Stop, Breathe & Think, and Buddhify aim to enhance emotional and ethical awareness while mitigating reliance on technology (McGuire, 2020). As terms like 'Mobile Mindfulness' and 'Cyber Zen' gain traction, Buddhist insights are helping us to navigate the complexities of digital well-being. In an era dominated by distracting technologies, incorporating Buddhist notions of well-being signifies a promising trend for the future, guiding individuals towards profound transformation.

Yet Buddhism may have other and even more substantial contributions on offer in the field of digital well-being, in par-

ticular in the way well-being is perceived (explored above). While contemporary discussions on digital well-being tend to align with conventional notions of a good life, Buddhism challenges these perceptions. In its 25-century history, Buddhist traditions embody expertise in mental well-being (Wallace & Shapiro, 2006), while also emphasising philosophical insights into the pervasiveness of suffering or our proclivity for continuing to suffer by seeking well-being in the wrong place (Harris 2020).

Apart from its 'attentional' contributions (such as mindfulness), Buddhism is a set of rich and complex ethical and philosophical traditions, including the concept of enlightenment or nirvana, or freedom from all suffering and the cycle of life, death, and rebirth. Rather than under-

standing well-being subjectively (using common intuitions about happiness or pleasant experiences, for example), Buddhism aims to identify the most profound form of well-being accessible to humans (Gowans, 2015). Three basic elements of the framework, especially when 'naturalised', come to the fore as potentially useful for the debate on digital well-being: the inescapable moral quality of our interactions, the possibility of durable inner peace, and active concern for suffering in the world. Or expressed in their

more traditional guise: karma, nirvana, and compassion (Gowans, 2015).

In conclusion, Buddhist traditions offer valuable theoretical insights into the nature and conditions of well-being and provide practical guidance for cultivating a deeper sense of fulfilment and contentment in life. By integrating Buddhist principles into contemporary discourse and digital technologies, we can navigate the complexities of modern life more effectively and promote the well-being of individuals and societies as a whole.

Conclusion: The Future of Digital Well-Being

In this report, we've navigated the intricate landscape of digital well-being, drawing upon insights from academia and industry to highlight the key facets of this vital movement. Our exploration has revealed various perspectives and findings, showcasing the dynamic interplay between technology and human well-being. From examining strategies for digital well-being to exploring the importance of digital and non-digital solutions and considering diverse perspectives, the report underscores the multidimensional nature of this critical issue. While digital solutions play a significant role, we've highlighted the profound benefits of non-digital strategies such as coaching, slow movements, digital detoxes and self-awareness practices. These approaches empower individuals to cultivate resilience, agency, and a deeper understanding of their relationship with technology. By integrating these non-digital solutions into contemporary discourse and digital technologies, we can enhance a human-centred approach to well-being and foster a more balanced approach to digital living.

We have highlighted the significance of prioritising digital well-being in today's increasingly digital society and the need for intentional, collective efforts from both industry and academia to ensure that technological advancements align with human values and societal needs. The report emphasises the importance of recognizing and incorporating diverse perspectives, acknowledging that digital well-being varies among individuals due to cultural, physical, and mental differences. It calls attention to the responsibility of organisations to design and develop technologies that promote well-being and resilience across diverse user groups. From non-Western philosophies such as Buddhism to cultural insights from regions such as India, we've seen how varied perspectives can offer invaluable wisdom in navigating the complexities of the digital landscape.

Central to our discussion is the profound importance of digital well-being in today's digital age. As technology becomes increasingly integrated into every aspect

of our lives, ensuring the well-being of individuals and communities must be a crucial concern. By prioritising digital well-being, we can foster healthier, more balanced interactions with technology, enhancing the overall quality of life. As we move forward, organisations must take action to integrate digital well-being into their practices and products. By adopting holistic approaches that prioritise the long-term well-being of users, companies

can contribute to a digital ecosystem that nurtures rather than undermines human well-being. Ultimately, the success and societal impact of our digital technologies depend upon our commitment to digital well-being. By embracing diverse perspectives, fostering responsible practices, and prioritising the holistic welfare of individuals and communities, we can forge a future where technology serves as a catalyst for human flourishing.

Editorship & Authorship

The editors of this report Daan Annemans and Matthew Dennis would like to thank the academic authors and industry experts for their contributions to the writing of this report. Lyanne Uhlhorn focused on Section 1.1 (Defining Digital Well-Being), Iliana Grosse-Buening focused on Section 1.2 (Strategies for Digital Well-Being), Kenneth Schlenker focused on Section 2.1 (Digital Solutions to Digital Well-Being), Anastasia Dedyukhina focused on Section 2.2 (Non-Digital Solutions to Digital Well-Being), Laura Moradbakhti and Anna Puzio focused on Section 3 (Digital Well-Being for Diverse People) and created all the figures and diagrams, Titiksha Vashist focused on Section 4.1 (Cultural Insights from an Indian Perspective), Gunter Bombaerts and Tom Hannes focused on Section 4.2 (Digital Well-Being from a Buddhist Perspective). Lily Frank and Ellen Gilbert added insights throughout the report and Ellen was also involved in writing the conclusion.

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Link to watch the *Future of Digital Well-Being Conference*:

https://youtu.be/YkevbTp_0F0?si=AENwvlulCclSKYYe

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This report offers a holistic view of the future of digital well-being, one that will inspire the next generation of designers of online tools and policymakers who will regulate these tools.

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