University of Stavanger

Change & changeability:

Work/life balance in a digital age

E-MBA 300-1 23H

Master thesis, 2024

UiS School of Business and Law

Authors:

Candidate no. 257576 **Cathrine M. Aardal**

Candidate no. 565423 **Magnus V. Birkenes**

Supervisor: **Bjarte Ravndal**

CHANGE & CHANGEABILITY

Work/life balance in a digital age

1st Edition | May 2024

Online, updated and overworked:

Do we still have a right to disconnect?

Bits & bytes of the **modern age**

The pros and cons of **digital dependencies**

The dawn of **digital natives**

Universitetet i Stavanger | Cathrine M. AArdal | Magnus V. Birkenes

E-MBA 300-1 23H

"We need to do a better job
of **putting ourselves higher**
on our own 'to do' list."

- Michelle Obama

FOREWORD

This master's thesis is the culmination of a three-year-long content-rich MBA program, and this document is a reflection of the learned experiences, accumulated knowledge and new perspectives we have been fortunate to receive.

We would like to extend our gratitude to our supervisor, **Bjarte Ravndal**, for his guidance and support throughout this journey. We appreciate that our somewhat unconventional approach to the assignment - our desire to think outside the box in terms of text, visuals and methods - has been welcomed with open arms in the name of curiosity, anticipation and academic innovation.

Pushing the envelope is both exciting and daunting, and we truly appreciate the freedom given to us during the process.

We also want to express our deep appreciation to our interview subjects, **Lars Bratsberg**, **Ole Jakob Madsen**, **Jens Hetland** and **Torgeir Waterhouse**. We are incredibly grateful for their willingness to participate and prioritize our dialogues despite their busy schedules.

A special thank you goes out to our spouses **Frode** and **Gunn Elin**, our children and employers for their understanding, patience and unwaivering support, enabling us to embark on this journey.

Cathrine **Myklebust Aardal** Magnus **Vågen Birkenes**

ABSTRACT

Throughout history, technology has made the world ever figuratively smaller, the universe exponentially bigger and the milestones along the way ever more monumental. It has led us to this, the fourth industrial revolution; the digital age, where we are more interconnected, more capable, more alert and less in control than ever before.

In today's rapidly evolving digital landscape, the boundaries between work and personal life are becoming increasingly blurred. This thesis delves into the multifaceted challenges of technology development, digitization and digital transformation, and how they impact work/life balance.

It aims to introduce various aspects affected by this phenomenon, focusing on the human, social and regulatory aspects in light of technological advancements, both present and predictions for the future.

One of the central questions this assessment poses is how we can effectively regulate the divide between work and leisure in the face of ubiquitous connectivity, if a distinction is desirable, or for that matter, even possible. If so, what tools and strategies can be employed to safeguard individuals in an environment where connectivity, digital media influence and permeates every aspect of life due to digitalization?

By examining the advantages and disadvantages of the digitally driven reality that now surrounds us, this assignment explores how our humanity and social interactions has and may transform.

It prompts reflection on whether it's still possible to disconnect in our increasingly digital society and whether the traditional boundaries between work and leisure are still necessary, or even possible, for current and future generations.

We also delve in the intricate dynamics of work/life balance in the digital age, drawing upon firsthand information, insight from four prominent professionals in their respective fields - giving unique insights and reflections not readily available in conventional literature, journals, or news articles to enrich our understanding of these pressing issues.

The thesis does not offer definitive answers, but is structured to shine a light on facts, ignite curiosity and inspire further exploration of topics that concern us all. The challenges posed by a data–driven reality are global in nature and warrants thoughtful approach from individual and societal perspectives, and pose questions of whether more rules are needed to ensure a safe and scrutinized development, as well as how generational traits, inherent human characteristics and lessons learned will influence the spread, use, benefits and disadvantages of technological advancements.

TABLE OF CONTENTS

CONTENTS

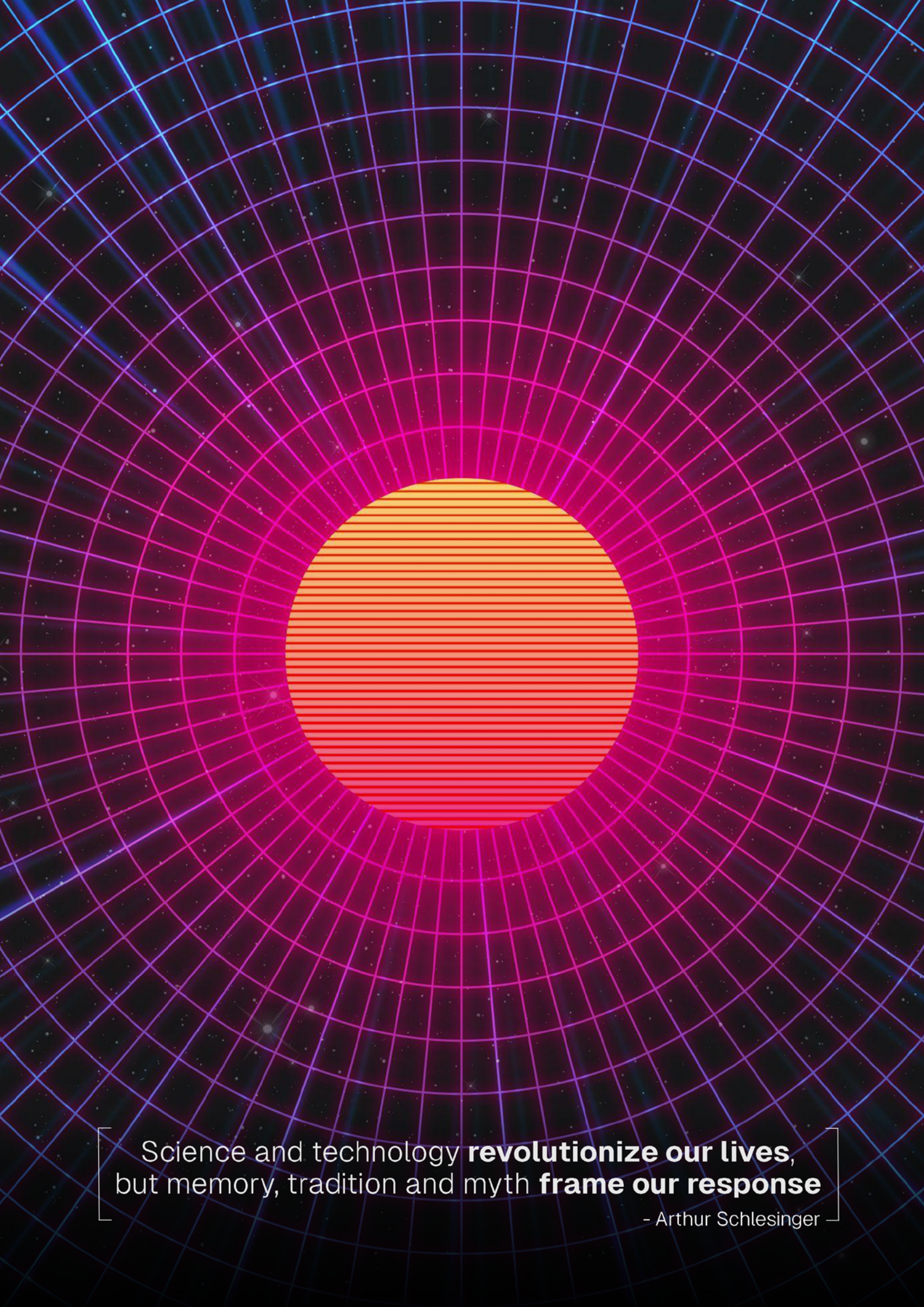
Page

THE SOCIAL ASPECT

THE REGULATION ASPECT

REFLECTIONS

CONTENTS


Science and technology **revolutionize our lives**,
but memory, tradition and myth **frame our response**
- Arthur Schlesinger

Introduction

Ceaselessly into the future

The rapid technological advancements in the current phase of the digital age has ushered in an era of unprecedented connectivity and convenience, influencing all aspects of modern human life, from cradle to grave.

Within the reach of interconnectivity, boundary-pushing chipsets, data flow technologies and a growing social sense of urgency, information flows seamlessly. Businesses increasingly transcend geographical boundaries, cultural imperialism is no longer a one-way campaign, personal relationships span the globe with clicks, swipes and facial glances and drones can deliver groceries to your 13th floor apartment after you spoke into your wristwatch on a whim.

We are truly living through an unprecedented technological watershed in human history, and things are evolving, fast.

While this interconnected world has enriched our lives in countless ways, it also presents an intricate challenge: We as humans do not evolve as quickly as the tools we design and possess. There are discrepancies and ever-widening gaps between what we desire to accomplish, what others expect us to do, what the tools allow us to produce and what social rules and norms are designed to regulate.

Not least: It has made it increasingly difficult to effectively balance work demands and individual desires for a fulfilling personal life. In a world where the gadgets, screens and interfaces we interact with every day are designed to effectively merge those very two aspects, how can we?

Surrounded by smart homes, smart devices, smart lifestyles and seemingly omnipresent intelligent design, the boundaries between professional and personal life have blurred, often eroding distinction between the two.

The new norm is 24/7. The office is wherever. The availability is whenever. The interconnected world is a blurse; a curious combination of a blessing and a curse.

This perpetual connectivity can lead to stress, burnout and a pervasive feeling of being “always on”. To add to the mix, the lure of digital distractions such as social media, online entertainment, and constant notifications have over the last decade and a half gradually shifted traditionally small scale everyday human interactions towards all-encompassing focus splits between our own personal needs and the perceived desires of others around us.

The semi self-inflicted pressure from technology also affects the very core of what it means to be human. By all accounts, technological advances have gradually changed us, the users. From the adaptive but frail armor of flesh that encapsulates bones that were developed to face a life on the move, to the complex hardware and programs that fit inside our tiny heads, we are evolving.

Arguably for the better. Arguably for the worse.

Despite the fact that the human body is probably the most advanced piece of machinery we will ever own, we have succumbed to external solutions under the guise of efficiency, practicality, productivity and politics.

Unwinding this all-encompassing ball of philosophical, practical, physical and psychological yarn could span a lifetime of work and still barely scratch the surface. But as adults, parents, students, career professionals, digital immigrants and future optimists, we still want to explore the topics to the best of our ability.

This thesis is our attempt to better understand the inescapability of modern society, and specifically seeks to delve into the multifaceted challenge of balancing work and life in the digital age.

It explores the impact this conundrum has on individuals as employees, as employers, as members of society and guardians of our own mental and physical health. We will look into the technological developments that have and predictably will shape society for current and future generations, and investigate the strategies and coping mechanisms that have emerged to address them and the challenges they present.

Some of these mechanics are judicial. Some are rooted in humanity itself, and some are, perhaps ironically, technology-based.

As we navigate the digital divide, it is crucial to understand the dynamics at play, the potential consequences of imbalance, and the ways in which individuals and organizations can work together to strike a harmonious equilibrium.

The sometimes-delicate balance of work and life impacts the mental and physical well-being of individuals, influences the dynamics of inter-human relationships, and influences the way organizations operate, care for and manage their employees.

NEW TIMES VS OLD HABITS:
Times are changing fast, and even though it's hard to pause and reflect in an ever-changing world, we really should, as these trends will not pass.

The aim of this thesis is not just to spotlight and provide insights into the various contributing factors to this balance, but also inspire us, as employees and employers, to help foster a more sustainable human role in a digital age.

We have started our exploratory journey with a hypothesis, or a belief, that despite the overwhelming and seemingly perpetual presence of technology in ever more aspects of society, humanity will prevail - that despite the pressure it presents on the fabric of our society, our bodies and inter-human relations, we will adapt, overcome and hopefully become a stronger, more pan-global community.

That might be naive, but the old comfort phrase of "this too shall pass" is not realistic in relation to the topics at hand. We need to react, and we are very much looking forward to exploring the why, how and what of the past, present and future, albeit limited by the time and space available to us.

Our approach

1.1 On the surface, off the deep end

Embarking on an exploration, mapping and discussion of the vast and multi-faceted topics to be unwrapped under the banner of the Digital Age is a massive undertaking, where the key to an informative, productive and hopefully provoking end result is not to cover every base, but restrain and restrict ourselves from overreach. That makes the why, the how, what and the why not important parameters for outcomes on the recipient end of this thesis.

Signs of the times: Why even do this?

Why is this topic important to us? The answer is simple, but complex. Over the course of our EMBA program we have explored a multitude of interconnected and wide-ranging topics associated with modern life, business, human interaction patterns and models, leadership, economy, societal change and politics. There is one common denominator for all of it: The digital age, and all the challenges, opportunities, changes and pitfalls it entails.

By addressing dilemmas with tie backs to work/life balance and related aspects, we can put to knowledge gains from the past three years to the test, especially as we have experienced work/life issues first hand - juggling full-time jobs where the desk is never empty, attending lectures that for some reason were almost always scheduled at the worst time possible, parental leave notices that never aligned with to do-lists, attending webinars in the midst of domestic turmoil, occasionally trying to get a proper workout in, not leaving friendships out to dry and managing to travel for holidays and peace of mind whenever able.

We have felt the issues we intend to shine a light on in this thesis throughout our EMBA journey, and it is still something we must navigate every day.

1.1.2 Reflecting on methodological choices

Our assignment is based on three criteria - it should be innovative, represent the present with a glimpse of the future and interweave two vastly different academic backgrounds - one clinical psychologist and a marketer/technology optimist/editor. We share the same curiosity about our topic but with completely different expertise and interests in the various subject dimensions. We question how the lives of individuals and society evolve with new technology and development. To gain insight, we need to understand both the use and development of technology, as well as the functioning and influences of individuals and society, and the combination of our expertise provides an interesting starting point for understanding the connections we aim to explore.

Many have written articles, books, and master theses addressing the topics we are discussing. There are already excellent quantitative methods and analyses, knowledge summaries, case studies and articles written. There is no reason for new replications.

We want to do our thesis in an untraditional manner, by wrapping it up like a popular science magazine, where images and graphics entice and generate interest in the subject, while the content is intended to be as thorough and relevant as in a traditional master's thesis. Our goal is to leave the reader with a feeling of having been immersed in a digital world with unlimited choices and information, prompting further reflection and contemplation about the time we live in and how it will evolve. We aim to inspire as much as explore.

By presenting this in a non-traditional manner, we aim to highlight the notion that through the use of new technological tools, untraditional ways exist

for gathering information and writing assignments. It must be acknowledged that educational institutions need to adapt to a new world of digital tools, even for master's theses, to adjust and open up for more sustainable approaches for future academic works. Above all, we want to captivate our readers and prevent them from becoming bored.

1.1.3 Why we're not diving deep

Writing a master's thesis is time constricted. Unlike the theme we choose to focus on, it has a start and end date. There are many possible choices for how we could illustrate this — showcasing our work within a short time frame, while giving a glimpse of a timeless universe.

We have to make a choice whether to broaden our scope to create engagement and explore overarching themes, or to narrow down and delve deeper into one specific topic. We are ambitious and set goals to provide an introduction to the theme, to illustrate connections between various aspects. To succeed in ding so, we employ several strategies.

By exploring overarching themes and providing an introduction to the topic, we aim to engage the reader's interest from start. We strive to have an interdisciplinary approach, connecting various topic aspects, showcasing interrelations and raising questions about potential conflicts and solutions. Through open-ended questions and possibilities, we encourage readers to reflection the topic beyond the thesis. We do not aspire to find a definitive conclusion, but rather inspire further inquiry.

Finally, we remain personally engaged and interested in the topic throughout the writing process. While entertaining our reader, we also want to keep from boring ourselves. Our enthusiasm will hopefully translate into our work, making it more engaging for the reader as well.

1.1.4 Sources of inspiration: Interview insights

What is most inspiring for us is our conversations with the individuals we have the opportunity to talk to. They provide us with insights into their expertise on various topics, offering a glimpse into their knowledge and experience.

We will conduct Team interviews with four different men who are experts in their respective domains- viewing them as having entertainment value and becoming more personal than a name in a book, journal or an article. These sources are meant to provide interesting and firsthand information. We do not aim for a typical qualitative interview study; instead, we prioritize quality over the quantity of participants.

We considered whether to follow a classic design, but made an early decision to craft a product that is not traditionally structured. After all, times are changing, and so should the writing approach. We aim to reflect this in our assignment by utilizing digital media tools such as Teams, AI and email correspondence. Graphic illustrations are created using own graphic design skills, Adobe Photoshop, Illustrator and InDesign and, serving as concrete examples of possibilities in a digital world. Softwares like this make it possible to explore new techniques and illustrative concepts, as there are virtually no limits to what can be achieved with these tools and a sliver of creativity.

There is always a need for design and methodology evaluation. It is crucial to emphasize that interviews are not research, but rather a means to convey personal viewpoints. It is imperative to be mindful of obtaining informed consent ensuring they have sufficient information and acknowledge that the study will be evaluated and could be publicized if it is deemed interesting for others.

We believe we'll manage that.

Our interview subjects will receive written transcripts of the conversation for review with an opportunity to comment and amend. They also consent to the use of video recordings during the interview, and agree for the content to be translated into English. The video recordings are transcribed and deleted after six months. Our interview objects will provide us with their copyrighted photos, which are to be edited and incorporated into the assignment. They request the complete tasks to be sent to them upon completion.

We aim for an open-minded approach and try to remain vigilant against bias, striving to represent diverse voices and perspectives - though it is not always easy to navigate. The fact that our master thesis relies heavily on references from prior research in Norway and other countries means we will have to exercise care when selecting resources and references, avoiding plagiarism and directly cite the original research papers. As of 2024 these issues are hot topics, with a high levels of scrutiny towards plagiarism, lack of references, proper quoting and the use of artificial intelligence in master thesises.

This is equally relevant for ordinary students as for other professionals, even though the focus is mostly set on those we have chosen to govern our country - and who are now being deemed unfit due to cheating in their master thesis. We will strive to avoid that position - now and for the future.

Our topics are of global interest and unfortunately suffers from a high number of "clickbait" headlines and discussions. We need to distinguish between sensationalist information, journalism and science/research that provides us with a deeper foundation of understanding and what we aim to convey - and to communicate this knowledge to the reader.

We primarily used search engines such as Google Scholar, UiS-certified databases and general web searches, but also asked for relevant information and references with ChatGPT - the available literature and tools have no limit in a digital age. In-person library visits are no longer necessary.

Will we become any smarter by writing this assignment? Will it provide us with more insight into the topics we approach? Will we succeed in weaving together the acquired knowledge in an understandable and interesting manner?

The answers are yet to come, but through this assignment we will put to practice all we have learned about project management, collaboration, leadership dynamics, trust, coping with differences and each other's degree of neuroticism and ultimately producing a result we are proud to have created together.

We aim to be just as, if not more, curious at the end as we were when we started.

Hopefully, you will be too.

1.2 Defining key concepts

An exploratory journey looking to delve into the main aspects of what forms the basics of a sustainable work/life balance in the digital age will include several known and obscure terms, and we'd like to establish a common framework before we begin. By defining key concepts and delineate them against others' definitions, we hope to establish a common understanding for what will form the basis of our discussion and help ensure a shared understanding of the terms we will be using.

1.2.1 What is change?

Change is a ubiquitous and multifaceted phenomenon that shapes the dynamics of individuals, societies, organizations, and systems of nature. It is the main proponent of progress, evolution and adaptation, and can be defined as the process of transformation or transition from one state, condition, or form to another.

"Change is something that has occurred when one can trace partially significant differences in conditions at two points in time" (Jacobsen, 2004 in Sander, 2023, p 1).

Change often involves modifications in behavior, beliefs, systems, structures or environments. It refers to the process of alteration or undergoing transformation over time. It can encompass both minor adjustments and major upheavals in condition, state or behavior (Jakobsen, 2004 in Sander, 2023). Changes occur on numerous domains and levels, from interhuman developments, modification of societal structures, physical alterations, shifts in philosophy, altered mindsets and value interpretation and revisions necessary for a more sustainable environment.

This document will focus on how technology changes human and societal structures and how it affects our lifestyle, development and predicted future in relation to work, life and individual and societal sustainability. Human change refers to alterations in thoughts, feelings and behaviors, whether induced by internal processes or external factors. It encompasses cognitive, emotional, and behavioral transformations in individuals or groups (MantraCare, 2023).

The term societal change refers to macro level transformations or shifts that occur in society, such as in ideological structures, norms, values, and institutions. It may include political, economic, cultural, and technological changes that impact society (Harper & Leicht, 2018), both short term as trends and zeitgeists and long-lasting, sometimes irreversible. Change denotes planned or unplanned alterations in organizational processes, strategies, structures or cultures aimed at achieving desired outcomes or adapting to external forces such as market dynamics or technological advancements (Harper & Leicht, 2018).

1.2.2 What is changeability?

The term "changeability" is closely related to the concept of change, and is similarly used in several different fields and disciplines. It refers to the ability, willingness or lack thereof and quality of something to be changed or adapted to new circumstances; how flexible or adaptable something is in the face of alterations. Changeability is considered the inherent and intended ability of a system to transition from one state to an altered state over time (Ross, Rhodes & Hastings, 2008 in Sullivan, Nava, Rossi & Terzi, 2023).

"Changeability" can be theorized within various fields, including but not limited to psychology, sociology and organizational theory. Within psychology, theories related to adaptation and change processes, such as Piaget's theory of cognitive

development or Bandura's social learning theory, can help understand how individuals adapt and change in different situations (Bandura, 1971).

Within sociology, theories of social change and societal influence like Talcott Parsons' theory of social evolution can shed light on how societies change over time and affect individual adaptability.

Theories such as Kurt Lewin's change model or John Kotter's eight-step model for change management can help understand how organizations can effectively handle and adapt to changes.

We will not delve further into explaining these models, as a cross-disciplinary definition and understanding of what "change" and "changeability" entails can be achieved by using the general descriptions presented above.

1.2.3 What is work / life balance?

According to Zedeck and Mosier (1990), there are typically five main models used to explain the relationship between work and life after work: Segmentation, spillover, compensation, instrumental, and conflict models (Zedeck & Mosier, 1990). The conflict model has received the most focus in recent years, and we deem it most relevant for this thesis. This model points out that with high levels of demands in all spheres of life, there is a need for choices to hinder overload (Guest, 2013). According to Guest, work-life balance can be seen as a metaphor, and balance is a set of scales, where balance is reached when there is an equal distribution of weight or amount (Guest, 2013).

Some describe it as the relationship between work and family, while others see it as between work and leisure (Allen, Johnson, Kiburz & Shockley, 2013 in Andersen, 2022). Some argue that work-life balance should be replaced by the concept of life balance (Posa, 2021 in Andersen, 2022). The relationship between work and leisure is often described as conflict-ridden, where different roles and obligations risk conflicting with each other as work intrudes into home life and vice versa (Ellingsæter, 2017:,Ladkin, Willis, Jain, Clayton & Marouda, 2016 in Andersen, 2022). A healthy balance between work time and leisure time is understood from this perspective as a clear distinction between the spheres, where a lack of distinction can negatively impact health and social relationships.

1.2.4 What is digitalization?

When discussing topics related to the the digital age, it is important to be aware of subtle, but important distinctions between certain labels. **"Digitization"** is one, and it's often confused and interchanged with the term **"digitalization"** and the ways it affects daily lives, business operations or ways of doing things, which is usually referred to by the umbrella term **"digital transformation"**.

In short: "Digitization" is where it starts, whereas "digitalization" is where we are right now, and how we do it and what it leads to is "digital transformation". The distinction is important, not just for the sake of the content of this thesis, but for an overall understanding of the technological framework that gradually encompasses more and more of everyday life, the human stance and effects, and the social implications of said technological changes.

IT industry analyst Jason Bloomberg defines digitization as "taking analog information and encoding it into zeroes and ones so that computers can store, process, and transmit such information (Bloomberg, 2018).

In other words: Making something that was originally analog and making it either into digital versions or a version that is digitally compatible.

One example would be switching from handwritten notes to computer-based word processing, or transferring music from LPs to digital formats such as MP3s for digitally based outputs.

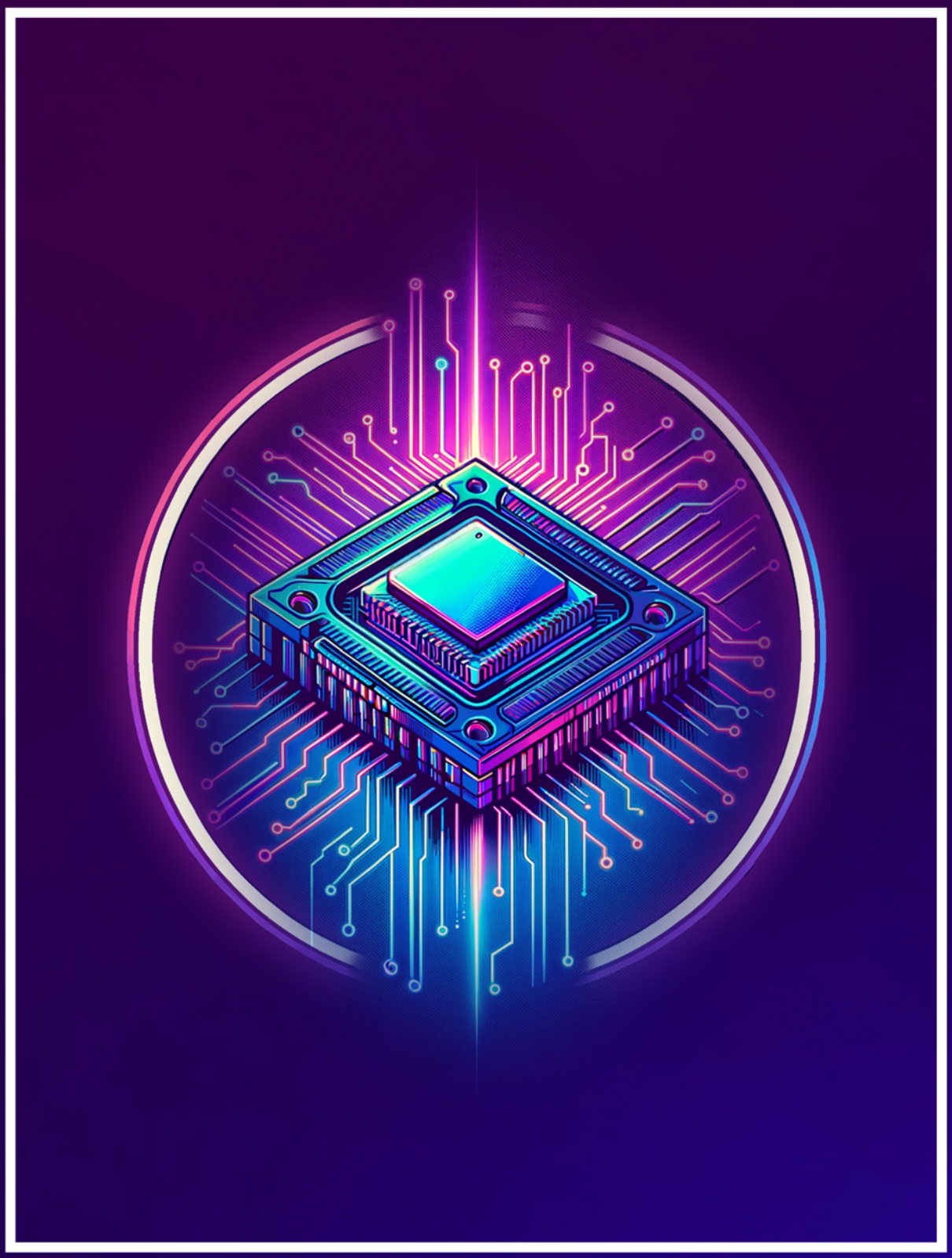
Digitalization is harder to explicitly define, but J. Scott Brennen and Daniel Kreiss define it as “the way in which many domains of social life are restructured around digital communication and media infrastructures.” (Brennen & Kreiss, 2016, p 1).

It is the way digital elements either allow us or force us to act or behave along certain patterns. One example would be mandatory web-based tax reporting, payment card-exclusive transactions or the requirement of a smartphone app to gain access to crucial features of domestic life.

“Digital transformation” is defined as something that is “not just an organizational issue, but it is becoming more and more an ecosystem and societal challenge and necessity” (Gong and Ribiere, 2021, p 15).

In other words: A conscious and/or semi-conscious way to adapt surroundings, strategies and actions to the digital changes around us.

The content of this thesis will primarily be related to the “digitalization” aspect of the digital age, or rather the continuation of that, digital transformation. We will focus on how we use technology, how humans interact and/or get affected by it and the implications it has on society, and how it has, and unstoppingly continues to, transform every aspect of society.



The **technology** aspect

The technology aspect

The age of scares and hopes

Humanity has always pushed boundaries. It's in our nature. Fueled by a potent combination of inherent curiosity, critical thinking, a this-seems-like-a-good-idea-right-now mindset, perplexing tendencies to ignore sunk cost fallacies and an ego-driven quest to improve our own life under the guise of social context has led us through periods of unprecedented growth and innovation.

Combining all that with a set of lovely practical opposable thumbs has let us navigate towards great advancements.

As a species we have already championed through six major evolutionary phases:

- We learned to rule the fields and harvest the bounty.
- We managed to construct behemoth-sized machines to make almost anything at scale.
- We domesticated electricity and made it move things in ways we could not.
- We broke information down to bits and bytes in the name of logic.
- We deconstructed the building blocks of the human body, down to the tiniest of cells.
- We learned to take nature seriously

Now we are close to perfecting how machines can replace the best and worst of us - slowly but steadily handing more and more aspects of our lives over to digital processes, robots and automation.

We might not think too much about it. We might not even be aware. Some might not even care. Still the fact remains: We are currently living through the seventh watershed period of human history. Like all the revolutions before it, it is scary when it happens, over-exposed and exploited when it is standardized and, if we get it right, beneficial in the long run.

At least that's what we are all hoping for.
Right now, it is mostly overwhelming.

Unlike other preceding technological paradigm shifts, this one is incorporated into more aspects of human life faster than anything before it and proved to be more addictive and immediately life-altering than anything we could have anticipated. It can be granulated even further; the current digital age is indeed the 4th industrial revolution, with the first being marked by the invention of the steam engine around 1760, the second starting in the late 1800s with the invention of mass production and early telecommunications, the third in the 1960s with the first computers and the current fourth revolution beginning at the turn of the century, when internet started to become household, electronics became smaller and digital transformation began to take hold in businesses, societies and homes.

It has so far been a whirlwind of development, and has fundamentally altered how we live, work, and interact on a global scale. World conflicts haven't stopped it. Financial crises didn't put the brakes on anything. A global pandemic even sped it up.

It shows no signs of slowing down, and it gradually spreads to more and more aspects of everyday life, from every form of human interaction to conscious refrigerators, self-driving cars, automated business transactions, algorithm-driven consumer tactics, robots on the battlefield and virtually simulated extreme sports.

THAT WAS FAST: Humanity is on a roll. It took 2.4 million years for our ancestors to master fire for cooking, but only 66 years from the first successful flight before we managed to gracefully land on the moon. But can humanity keep up with its own inventions?

We even made internet-connected toilets (Kohler, 2024), because why not.

Curiosities aside, this evolution has not only re-shaped social life, industries and economies, but has also significantly influenced the delicate balance between work and life, with profound implications for the overall quality of human existence.

It has made information exchanges more efficient, attendance intermittently optional, work hours more flexible, data arguably more secure, businesses more competitive and to a stretch, contributed to waste reduction.

Those are all mostly good things, theoretically paving the way for the science fiction utopias we used to dream about.

It might also spell doom for some well-established, arguably key elements of human life.

Like the diminishing importance of human mentorship; a strengthening, knowledge-based bond between humans that has been a backbone of societies for millennia. It might be detrimental for human creativity, removing the need for paced innovation. It might impair our physical and mental state, making us more vulnerable. Or it might lead to an exponential rise in the cost of doing business – while also widening the social gaps between the have and have-nots.

Not to mention the inherent fear of every human, anywhere on the timeline: Forced displacement. In this case by machines.

There are a lot of uncertainties. The challenge now lies in navigating the complex interplay between technological innovation and the well-being of individuals and society - striking a harmonious balance between the demands of work and the pursuit of a fulfilling personal life requires intentional choices and a thoughtful approach to the integration of technology into our daily routines.

A silicon symphony in the making

In the last 40+ years, the world has gone through unprecedented technological developments, and this is only the beginning.

1980 — One million computers worldwide. Sony Walkman launches, a first in portable media.

1981 — Commodore VIC-20 launched, selling 1 million. IBM releases first home PC. MS DOS 1.0 debuts

1982 — TIME magazine nominates the PC as the "Machine of the Year", the first non-human ever nominated

1983 — GPS becomes publically available

1984 — Apple releases Macintosh, the first mass produced PC with a mouse and graphical user interface. CD-ROM disrupts data storage and music industry

1985 — Windows 1.0 released for $100. CD-ROMs can store 270,000 text pages. First Internet domain name, symbolics.com, is registered.

1986 — The first IBM PC virus, Brain, is released. First mailing program, LISTSERV, is developed. Compaq introduces 386 PCs for home computing

1987 — First pocket sized cell phone is launched, costing 2.500 GBP (8.700 GPB today). Powerpoint 1.0 is released. It only supports black and white

1988 — First electronically link global hotel reservation system introduced. It still exists today as “Pegasus”.

1989 — Computers worldwide reaches 100 million units

1990 — Hypertext (the basis for world wide web) is invented. First webcam goes online at Cambridge University

1991 — Notebook PCs are introduced. Ads call them “freedom machines”

1993 — 130 websites exist, all text-based. Apple launches Newton, the first Personal Digital Assistant

1994 — First spam email. The sender lost his job and internet access. Yahoo! is founded. VoIP is launched

1995 — Amazon and eBay launched. Hotels can now be booked online. First dating apps. Microsoft launches tools for remote work

1996 — USB standard is created. It still doesn’t fit on the first try

1997 — Wi-Fi becomes publically available

1998 — Google opens new main office in California

1999 — First Blackberry and Bluetooth 1.0 is launched. Napster enables music piracy, disrupting the music industry

2000 — 60% of U.S. households own at least one computer

2001 — Apple releases the iPod, disrupting portable media. Online travel booking grows at a rapid pace

2003 — Intel integrates Wi-Fi in their chips, setting industry standards. Spam e-mail exceeds legitimate e-mail

2004 — Facebook is launched

2005 — YouTube is launched

2006 — Twitter arrives. Web 2.0 (aka Social Media) becomes the standard

2007 — iPhone revolutionatizes the mobile phone industry. Google releases Google Docs and Street View.

2010 — Apple introduces iPad. 2/3 of people own cell phone. Video calls become common. Blockchain is launched

2011 — 800 million Facebook users. 10+ billion phone apps downloaded. One million+ apps exist. Cellphones fuel Middle East uprising

2013 — Beacon technology enables location-based marketing

2015 — Amazon Echo and Alexa introduces “smart homes”

2020 — Covid-19 leads to increased remote work, online learning, telemedicine, e-commerce, contactless payments and online entertainment

2023 — AI becomes public, sparking debate. Blockchain becomes trusted security standard. Cloud computing, IoT and 5G become norms. Quantum computing development accelerates.

Adapted from Ball, C. (2023)

2.2 Development predictions: To infinity and beyond

In line with typical human hubris, we have always considered ourselves fairly technologically advanced at any given time in history. But technology develops exponentially, and predicting the future is as hard now as it was 50 or 800 years ago, even though we know more now than ever before.

To put the exponential development of technology in context, consider this: It took 2.4 million years for our ancestors to master fire and flame for cooking, but only 66 years from the first successful flight before we managed to land on the moon (Roser, 2023). It took less than a decade from the introduction of the first handheld smartphone before they became an omnipresent influence in every part of our lives, night and day.

We say "exponential", but a better term would perhaps be "scary fast".

It might seem like we're speeding on the information highway right now, but that highway is continuously under reconstruction. Making predictions for the future development of technology, especially related to work-life balance and human-technology interactions, will undoubtedly be inherently speculative.

We can however make some qualified guesses:

Augmented Reality and **Virtual Reality** did not explode like many thought it would in the mid 2010s, but the technologies keep improving and growing. They will undoubtedly become more important in relation to engineering and construction work, allowing more people to do traditionally hands-on work from the comfort of their own home, from remote locations and without the need for travel or inconvenience.

It will allow the creation of virtual office spaces, meetings and collaboration, and might help reduce the feeling of isolation associated with remote work.

Artificial Intelligence (AI) is still in its infancy, but will grow in both scope and complexity. Used right, it can contribute to the greater good, and AI-driven systems can analyze individual work habits, preferences, and productivity patterns to optimize personal work schedules, with the ability to increase productivity, minimize burnout, and promote a healthier work-life balance.

Predictions by the World Economic Forum state that AI will reach human-level capabilities in the mid 2050s (Roser, 2023), but possibly way sooner. Whereas most everyday people might think of AI in terms of input-assisted text-, image- and problem-solving capabilities, the industrial and social system implications and possibilities are far, far greater. The use of AI in sectors like law enforcement, social welfare, risk management, military (scary as it might sound), public services and education have enormous and all-encompassing possibilities, but will require both scrutiny (ethical and practical) and fail safes for the foreseeable future (Hendrycks, Mazeika & Woodside, 2023).

Mental health is equally important to physical health, and the rise and capabilities of **wearable technology**; watches, sensors, apps and even implants will continue to push boundaries, possibly offering real-time feedback to help individuals manage their mental health in the workplace.

Advanced biometric technology will also be able to help provide feedback on things like posture, physical activity, and even offer reminders for breaks, encouraging healthier work habits; elements humans have a tendency to overlook, which can directly affect quality of life in the long run (Godfrey et al., 2018).

The heart of AI

AI technologies are by large based on a concept called **machine learning** (ML). ML-models autonomously improve themselves via automated data input, using what is called **deep learning**, which involves extensive use of "**neural networks**".

What are neural networks?
Network designers first set measures of what results can be defined as a success. The neural network processes data by passing it through several hidden "layers" of simple calculations, with each layer made up of "neurons". Each neuron receives data from the previous layer, calculates based on its parameters (specific to that neuron), and passes the result on to the next layer. The degree of success (according to the measure chosen) will depend on the exact values of the parameters for each neuron on the network.

The network is then trained using a large quantities of data. By using an optimization algorithm, the parameters of each neuron are gradually tweaked each time the network is tested against the data using a loss function.

The optimization algorithm will make the neural network perform slightly better each time the parameters are tweaked. Eventually, the engineers will end up with a network that performs pretty well on the measure chosen (Hilton, 2023).

In simpler terms:
Neural networks are data models set to process data repeatedly to improve over time until a desired result is reached. Deep learning is a common term for a system using many neural networks.

Deep learning is the core fuel of AI, and is the reason why for example AI-based image generators had a tendency to show humans with twisted fingers and hands in 2022, but produced close to flawless images of delicate, life-like human hands a year later. It's also the type of logic driving AI and robots to determine mankind to be the main source of problems in apocalyptic sci-fi movies, so...fingers crossed.

The ever-growing presence of what is commonly known as the **Internet of Things (IoT)** - where everyday objects, large and small, are constantly hooked up to the internet - will undoubtedly keep influencing our daily lives in the decades to come.

Your wi-fi connected toaster and voice controlled living room lights are just the beginning. As more and more objects, services and interactions become internet-based, the implications and ripple effects will become gradually more felt.

On the plus side, it will allow for a more health-focused lifestyle, where clothes, shoes and peripherals can help you move and exercise more, eat better and increase health consciousness.

It might also make work more efficient, making working from home a more fluid and flexible option through improved access to data on additional surfaces and platforms.

Still there might be downsides: It can effectively blur the lines between work and personal life, as the same devices might be used in both settings. It can also lead to information overload; a constant stream of data and updates that can be stressful and overwhelming. An omnipresence of IoT can also make it ever harder for people to "disconnect", playing on human emotions like guilt, duty, perceived responsibility or the common threat of "FOMO" (Fear of Missing Out), which in turn can increase the risk of personal burnout.

The inception of **blockchain technologies** started way back in 1991, but didn't really become a publicly known technology before the initial launch of the digital currency Bitcoin in 2008 (Yaga, Mell, Roby and Scarfone, 2018).

It was originally presented as a new way to replace traditional currency exchanges, payments and trades through secure and fraud-proof ledgers.

Although mostly known for the intangible concept of cryptocurrency, blockchain has since evolved into an enticing solution to ensure cyber security, and by association making it applicable for a number of social governance and sensitive data operations.

In the coming decades blockchain is predicted to make significant headway into areas like healthcare, industrial supply chains and not least: A deterrent against untethered use of AI, protecting source material and quality assuring results through algorithm tracing (Makridakis and Christodoulou, 2019).

The current state of Blockchain has been compared to the state of the world wide web in the early 90s, where we are only seeing the contours of future possibilities.

Mobile network technologies keep advancing, and will be paramount for the global spread of technology. Within the next decade we'll most likely see the full scale rollout of **6G networks**; the next iteration of interconnected device networking. Each "G" (short for "Generation") usually takes around ten years from concept to commercialization (Lu & Zheng, 2020), and 6G will provide unparalleled mobile internet access and ubiquitous connectivity.

It will enable true pan-global digital and human connectivity, enabling massive data transfers over long distances in ways we never could before.

That can mark a watershed for science, work efficiency and information access for remote communities, but it will also pose a great risk for "softer" aspects such as data privacy, regulatory actions, ethics and a widening of the digital gap between the more and less resourceful people of the world.

What is blockchain?

Blockchains are tamper evident and tamper resistant digital ledgers implemented in a distributed system with no central repository, and usually without a central authority, like companies, banks or governments).

Simply put: It allows data to be stored on multiple computers simultaneously, making it impossible to change data (e.g. commit fraud or make unsolicited data transfers) without every single computer on the network registering it.

Data is stored in a chain of "blocks" (hence "blockchain") and it is virtually impossible to change data without affecting the entire chain, which will not be allowed nor possible.

Even simpler put: ANY digital transaction that requires a middle man, e.g. money transfers, vote registration or product quality tracking, can be put through a blockchain system to eliminate any chance of tampering.

It is in theory foolproof, but the sheer complexity of how it actually works often leaves the general public stumped.

Its use is growing, though, and in a generation the understanding of how it works might be inherent knowledge.

(Yaga, Mell, Roby and Scarfone, 2018)

2.2.1 A two-way street of obstacles and opportunities

Diverting from technological developments themselves, tech companies are increasingly acknowledging their responsibility to address the potential harmful effects of their products, in relation to both human and environmental sustainability.

The digital age has seen upticks in both planning and executions of self-initiated and imposed corporate social responsibility strategies (Kane et al., 2017). This shift toward greater responsibility is being driven by several interconnected factors.

One significant driver is the rise of public consciousness. Heightened public knowledge and awareness around technology-driven pitfalls and dangers that tech providers face, both related to business models closely interwoven with personal lives (e.g. how mobile units and wearable tech notifications make it harder to both log off and shield privacy) and how their products and services adhere to official guidelines and results; the latter of which has been come under increased scrutiny by regulatory bodies like the European Union in recent years (Windekilde & Henten, 2023).

Another is the pure business-driven side of things, where studies show that companies that invest more heavily in sustainable digital transformation has a higher success rate than those who do not, as exemplified by both Orbik and Zozuľaková (2019) and Kane et. al (2017). Being invested in digital transformation for all the right reasons and with a long-term approach is good for business.

A third driver is societal. Questions on how we work, when we work, why we work and who we work for have shifted from being purely philosophical rhetoric by semi-apathetic youngsters to becoming core deciding factors for everything from career-planning to societal settlement patterns.

According to Tracy Francis and Fernanda Hoefel (2018), as stated in their McKinsey report "'True Gen': Generation Z and its implications for companies", "Companies should be attuned to three implications for this generation: consumption as access rather than possession, consumption as an expression of individual identity, and consumption as a matter of ethical concern." (Francis & Hoefel, 2018, p 2).

The current and coming generations are becoming increasingly wary, and the prevalence, use and inescapability of technology is paving a two-way street between providers and consumers, while regulatory bodies are doing their best to stay on the heels of both parties.

We delve deeper into the regulatory aspects of corporate legislation and governance in the digital age in Chapter 4 of this thesis, but from the perspective of individuals, there are significant generational powers at play.

THE KIDS ARE ALRIGHT:
Zoomers are digital natives, and technology is an extension of themselves. For better or worse.

The XYZ of digi-adoption

Generation X got its popular name from Douglas Coupland's 1991 novel "Generation X: Tales for an Accelerated Culture", and is usually attributed to people born between 1965 and 1980. They tend to emphasize working and producing, leaving less room for idealism, but at the same time they were the first to experience the new digital age the rise of mass media.

Despite this,they are less dependent on smartphones and screens than the generations that followed them.

Generation Y was born between 1980 and 1994, and are often referred to as "millennials" due to being culturally very active at the turn of the century. They were the first "digital natives" of the new digital age. Technology is part of their everyday lives, and most of their activities are screen related.

Despite this, they have clear definitions of on/off, as they migrated to the digital world from the analog world that preceded it.

Generation Z, or **"zoomers"**, were born between 1995 and 2010, and are digital natives from birth. Their mastery of technology is unmatched by generations before them, but this tends to rely less on interpersonal relationships.

At the same time they are more conscious than most to social causes, are influenced by global voices and forces to a great degree and they are infamous for being multitask-savvy, but at the expense of a shorter attention span.

(Iberdrola, 2024)

2.3 Here come the young ones: Accommodating the renegades

Every generation is shaped by the context and, increasingly, global framework of their upbringing. This is an inherent human trait, and something every parent, grandparent and an infinite number of great-grandparents can and would testify to.

Generational changes have however become more frequent subjects of studies and research in the last 70 or so years, after two global wars almost back to back radically changed the global economic, social, political and technological landscape. The Boomers born of the late 40s to mid 60s embraced consumerism as a form of ideology, the Xers of the flowery late 60s and ruthless 70s were all about status, and the Millennials (Generation Y) born from the early 80s to the early and naively optimistic mid 1990s turned to consuming experiences as major lifestyle driver (Francis & Hoefel, 2018).

The current generation, Generation Z (sometimes referred to as "zoomers"), who were born after 1996, are generally characterized by a number of key traits that distinguish them from their older peers. Some of which include:

- They value individual expression and shun being labeled
- They are easily motivated to engage in social issues across most human, societal, political, environmental and economic topics, greatly influencing their career- and workplace choices
- They have reiterated and re-embraced the notion that dialogue is key to problem solving and improve the world
- Their global mindset and community-based interactions enable them to make decision based on analytics and pragmatism

- They are more open about mental health issues (and are often overburdened by them) and prioritize well-being over other traditional values like physical status objects
- They value technology not just for entertainment (even though they are massive consumers of "digitainment"), but see it as a natural tool for both efficiency and flexibility
- Their entry into the workforce collided with the world upheaval during the Covid-19 pandemic, and combined with a digital nativeness they are prone to choose flexible working conditions (e.g. working from home or "hot-seat" offices with no fixed stations) and loose vacation policies over higher salaries.
- While open to both remote and hybrid work, they don't favor to the traditional 9-to-5, five-day work week (Ripplematch, 2023).
- They value personal freedom of expression and individualism significantly more than their predecessors, emphasizing how the option to make their own choices (often based on either personal beliefs or global "truths"), processed through tolerance, openness, acceptance and inclusion and "no labels", is the best way to attain efficiency, sustainability and growth (Francis & Hoefel, 2018).

In short, the current generation, which is gradually becoming a larger part of the workforce, has vastly different values, views and behavioral patterns than the average worker just 20 years ago.

They are also, with negligible exceptions, tech-centered in their life-, work- and social interactions.

This has major implications for how companies and society in general need to approach them, and sets a whole new precedent for corporate responsibilities and attention focus in a highly digitized world (Goldberg, 2021).

It forces the millennials and Xers, who often and/or usually fill leadership positions, to rethink and unlearn decades-old norms and philosophies related to what work is and should be, how it should be carried out and what measures need to be put in place to ensure efficiency, secure growth and reduce turnover rates.

2.3.1 New generation, new rules of engagement

Gen Zers are now increasingly dictating the modus operandi of more and more business operations. Where millennials championed CSR aspects like philanthropy (e.g. donating to NGOs or constructing public arenas, parks and green spaces), community development (e.g. group trips or putting on concerts) and sustainability (e.g. ethical sourcing efforts and cultural awareness) combined with a self-fulfilling outlook on life, their replacements are crusaders for a much more freedom-centric approach to every aspect of their lives (Francis & Hoefel, 2018).

They cherish a work/life balance like no generation before them, but they are adamant that it needs to be on their own terms (Goldberg, 2021).

Generational upheaval is nothing new, and some would argue that it is a core element of societal progress. The differentiating factor for Gen Z, and what makes this generational shift fundamentally different from the ones of the 20th century and the early 00s, is how their choices, opinions, outlooks and motivations are digitally driven and act as a fully integrated part of every aspect of their lives (Anderson & Jiang, 2018).

As of 2024 zoomers make up close to 30% of the total world population, and are expected to account for 25% of the total workforce by 2025 (Press, 2024). This inescapable fact emphasizes how this generation will massively influence how labor policies, practical job arrangements,

connectivity innovations and employer/employee interaction patterns will develop in the coming decades.

Technical prowess and gadget ownership statistics aside (see "Youth in Numbers", p 26), there are generational traits that will heavily influence these factors. These generational traits are numerous, and what they add to the complexity of issues is far-reaching and wide (Parker & Igielnik, 2020):

- They represent more diversity (ethnical, racial and gender)
- They are more highly educated (and have higher educated parents than Gen Y/X)
- They are politically progressive, generally leaning liberal in terms of policies
- They enter the workforce later (early 20s, rarely in their teens)
- They prefer public governance over private corporations (pro-government)
- They rank climate change and steady income as a primary fears/priorities

A 2022 survey by Deloitte (Deloitte, 2022), which collected responses from 23.220 Gen Y/Z respondents across 46 countries, entitled "Striving for balance, advocating for change: The Deloitte Global 2022 Gen z & Millennial Study", shows that in terms of work/life (and the balance), a growing percentile of young workers emphasize:

- Higher compensation (not willing to "climb the corporate ladder" the traditional way)
- More flexibility on how their job is being done (both location- and method wise)
- Better work/life balance (they insist they "have a life outside work")
- Increased learning and development opportunities (they expect to grow their careers from within the company)
- A steady income
- Better mental health and wellness support (they are also way more open about mental health issues and stress the importance of it)
- A greater commitment from businesses to make a positive societal impact (especially in areas like inclusivity and environmental consciousness)

Some of these keywords and factors are individually rooted and differ from person to person (albeit with some community-rooted commonalities).

Some are regional. Some are pan-global, some are tangible and some give off the impression of being results of zeitgeists.

In other words: It's complicated.

2.4 Challenges and discussions: Points of pressure

Based on all the traits, peculiarities and priorities of Gen Z, some work/life-related challenges stand out and calls for more in depth discussion; one being a demand for flexibility and the generational push for a redefinition of where work should happen, how it should be done and when, and the second being the rise of AI and other emerging technologies and how they will challenge the already uncertain future for both previous generations and an increasing number of zoomers/digital natives entering the workforce.

2.4.1 Far away and close: The evolution of remote work technologies

We have progressed so far into the age of the fourth industrial revolution that working from home - where, how and when - is easier than ever.

It is, however, far from a new phenomenon.

The youth in numbers

Here are some key facts about the generation that's about to grab the joy-stick from Millennials, updated for 2024:

- 95% of them have a smartphone, 83% own a laptop and 78% own an intenet-connected console
- The average Gen Zer got their first smart-phone at age 12. 50% say they feel "weird" if they don't have it with them.
- 85% of browse social media to look for new products and services, and 54% spend 4+ hours on social media daily.
- 80% of believe that YouTube is an essen-tial platform for learning, and 55% believe YouTube impacted their education.
- They prefer Instagram over TikTok. 64% use Instagram daily.
- 40% of working Gen Z claim they want to change jobs in the next two years
- 33% of all SoMe influencers are Gen Z
- 75% say they prefer to work remotely
- Their biggest concerns are climate change and steady income, and they value inclusivity as one of their most important issues.

(Press, 2024 & Anderson and Jiang, 2018)

It's simply growing in popularity, with different factors pushing it front and center, from trend-ing cultural phenomena (#WorkFromAnywhere, anyone?) to out-of-control and inescapable global circumstances (remember when we were all #socialdistancing?).

Going back a couple of handfuls of generations, before the first industrial revolution, working from home was the norm. Your craft, your services, your products and your pride were all usually based out of your own domicile, shed, garden or craft-ing space, and coming together to make things was usually done under the guise of the common good, slavery notwithstanding. The technology at the time set the precedent.

When we tamed steam and steel, introduced automation and assembly lines, embraced mass production and gradually realized the importance and value of data, things changed radically: Corporations, steady hires for menial and non-me-nial tasks, the rise of institutionalized capitalism and a steady onslaught of efficiency-driving tech-nologies (albeit almost exclusively on-site-based) made centralized work and employment the norm for over two centuries.

In the late 1990s, the corporate beast's push for technology-driven efficiency gradually started eating its own tail, making being up close and personal with the industrial machine slowly become less important.

The development and widespread adoption of high-speed internet and derivative collaboration tools such as email, instant messaging and video conferencing platforms not only reshaped work-place dynamics, but redefined the boundaries between work and personal life.

A little over two decades later, the massive public adoption of technology, efficiency, incorporation of data-driven realities and a generational quest for self-fulfillment has shifted both needs and wants in relation to place of work.

It seems it was long sought after. Numerous studies show that both previous generations (Gen X and Gen Y) and the current (Gen Z) increasingly prefer either fully remote or partially remote working options. Deloitte's 2022 survey found that 49% of Gen Zs and 45% of millennials either work remotely at last part-time, and a massive 75% of the total respondents said they would prefer working from home (Deloitte, 2022), whereas a 2023 study by Kantar Profiles showed that globally, 76% of workers are still working either fully from home or hybrid following the Covid-19 pandemic.

The numbers vary between countries and regions however, with the highest number of remote workers being in India and the US, with significantly lower numbers for western European countries like Spain, Denmark, the UK and France (Kantar, 2023).

Kantar's numbers for remote work preference is slightly lower than Deloitte's across generations at 55%, but still show that having the option to do so is much preferred, and half of the workers surveyed reported that they would seek new employment if the option to work remotely was to be taken away (Kantar, 2023).

The pros and cons of remote or hybrid work are two-sided, with extensive lists for both employers and employees focusing on different elements of business, life, socializing and sustainability.

To the future and back

Working from home seems very 2020s, but it is in fact the orginal way of doing things, dating back to pre-industrial times, where artisans and farmers worked from their homes or nearby fields, decentralized, free and on their own clock. With the rise of the machines of the Industrial Revolution, work centralized in factories and office buildings.

As the 20th century gave us ever more capable phones and computers, we became increasingly mobile and the necessity of office presence gradually shrunk. When the internet conquered everything in the 21st century, it enabled the digital transmission of work, effectively laying the groundwork for the modern remote workforce.

The COVID-19 pandemic of 2020 marked a significant turning point. Businesses were forced to adopt remote work to stay afloat, and that coincided with the introduction of Gen Z into the workforce.

They soon decided that they had little desire to lurk around offices all day, and by 2024, remote work has evolved into a mainstream work arrangement for a workforce that values flexibility, productivity, and work/life balance.

We are coming home, and have, aided by technology, effectively gone full circle.

Though the employer side of the remote/hybrid work options is both complex and interesting - covering aspects such as running costs, productivity, budget reconsiderations, HR issues and more - this thesis is focused on the employer/human perspectives due to length restraints.

2.4.1.1 The sweetness of home

Preference studies paint a fairly clear picture, but why do people actually prefer working from home? Humans have a proven herd mentality, so why isn't colleague camaraderie, social interactions, face to face teamwork and free coffee more compelling?

According to numerous studies, the pros of working from home are many and interconnected, with some of the top ones being:

Flexibility and flourishment: Can a person left to his or her own devices and unsupervised actually perform better? Studies say conditionally yes, with caveats. Barrero et. al (2023) emphasize that the adaptation process itself involves a good deal of trial and error and learning-by-doing. Thus, the productivity effects of work from home are likely to unfold over coming months or years, especially in terms of employer's need to redefine what constitutes "work". Employers often count working hours as "in the office", whereas employers add grooming and commuting time to the total. Figures provided by Barrero et al. show that when working from home, the average US worker spends 65 minutes less per day commuting when working remotely, and the same goes for productivity measurements; less time of the total work day spent not working will result in lower average productivity rates.

Their study also quotes their 2023 survey "Survey of Working Arrangements and Attitudes", which states that 43% of employees feel more productive when working from home (Barrero et al.,2023).

Satisfied minds: Satisfied workers stay loyal to their employers for longer, leading to lower turnover rates, improved trust and improved innovation. The ability to work remotely is often linked with higher job satisfaction, as employees appreciate the flexibility and autonomy associated with choosing their work settings.

Studies by Yu and Wu (2021), Jawabri et al. (2022) and Carraher-Wolverton (2022), have supported the notion that remote working can lead to increased job satisfaction.

The key word is autonomy, as workers can tailor their work settings preferentially, plan social interactions better, be themselves and only put on proper pants when it's absolutely necessary.

However, as noted by Carraher-Wolverton (2022), both satisfaction levels and subsequent productivity output depend on employers' ability to communicate demands and changes under remote working conditions.

The harmony of balance: One of the most celebrated advantages of remote work for employees is the enhanced work-life balance it offers. Having the ability to structure work hours around kindergartens, errands, narrow public office opening hours, personal commitments and lifestyle in general allows workers to manage time more effectively.

According to studies by Pillai and Prasad (2022) and Berger (2023), remote work arrangements can significantly improve employees' perceptions of work-life balance, leading to higher job satisfaction and well-being. Berger states that "While both small and large life or work events may cause temporary disparities in work-life balance, the flexibility of remote work schedules enables individuals to quickly pivot and maintain an overall positive influence on work-life balance" (Berger, 2023, p 15).

REMOTELY HAPPY AND WEALTHY?
Working from home is a huge time- and money saver for many, but the question remains whether it's sustainable in the long run.

Right in the wallet: Cost savings: Remote work eliminates the daily commute for many employees, translating into significant cost and time savings. The absence of a commute not only reduces transportation expenses, but also spares employees from the stress and time lost in traffic or public transport. A report by Global Workplace Analytics (2020) highlights that the average employee can save between $2.500 and $4.000 per year by working remotely, due to reduced commuting, parking and professional attire costs. Nice suits and shoes are expensive, after all.

2023 numbers found that 60% of employees surveyed said that working remotely would allow them to live in an area with affordable living costs (Ripplematch, 2023). Cost savings might also help alleviate one of the main concerns of the younger generation: Being able to stay long-term financially secure, via less travel expenses, less money spent on excessive items and the ability to flex one or more jobs.

Easy green: Making efforts to reduce environmental impact in relation to both work and life in general is high on the agenda for an increasing number of people, and a primary driver for the growing Gen Z part of the workforce in particular. 56% of Gen Zers and 48% of millennials say that they are not satisfied with the environmental commitment efforts by their employers (Ripplematch, 2023).

Remote work might help offset that, at least from employees' self-centric point of view. By eliminating the daily commute, remote work substantially decreases greenhouse gas emissions, a major contributor to climate change.

Global Workforce Analytics estimate that if half the US population held remote-compatible jobs, and worked from home half the time, the reduction in greenhouse gas emissions for the US alone would close in on 54% annually; equivalent to taking 10 million cars off the road (Global Workplace Analytics, 2020), with additional benefits like less maintenance, road dust, noise etc. on top. According to a study by Kylili et. al on the environmental impact of remote work in Cyprus, "at least 4.0 liters of fuel and 7.4 kg of CO_2 can be saved per hour of remote work per 100 employees" (Kylili et. al, 2020 p 2).

Another significant green factor of remote work is the reduced need for office spaces, which are vast consumers of power, as home offices typically consume less energy per employee. Other cumulative factors include reduced paper and plastic consumption, less urban congestion, increased use of local businesses and more sustainable food consumption. It might be kept in mind that internet use is not pollution-free, as increased virtual traffic draws a lot of power.

Let's not even mention cryptocurrency mining…

2.4.1.2 Home alone and uncertain

People are as diverse as the tasks they do, and even though a high number of surveyed employees state that they either would prefer working

remotely or at least have the chance to, it's not all roses, even for those that voluntarily do. Even though a study by Kantar Profiles (2023) shows that 70% of employees agree that hybrid working options create positives, 14% feel the opposite.

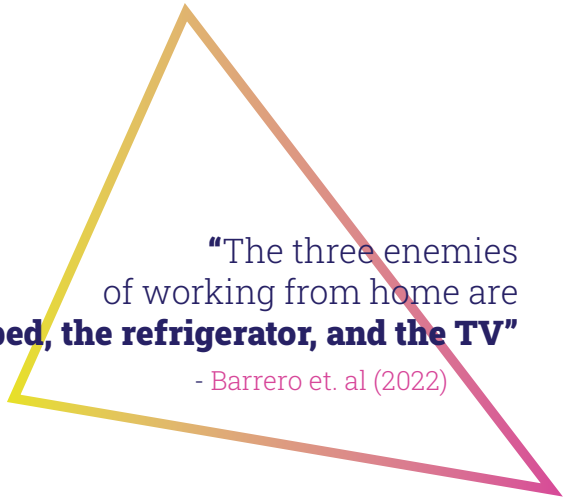
There are cons, but the question remains whether they outweigh the positives:

Casting lonely shadows: One of the most cited disadvantages of remote work is the potential for isolation and loneliness. The lack of physical presence in an office environment can lead to feelings of being disconnected from colleagues and the organization you work for.

This might lead to significant dips in motivation, and subsequently harm productivity levels. Barrero et. al., state that workers who are aware of the dangers of distraction might even choose to work on-site or at the office despite their initial work from home desires (Barrero et. al., 2023).

A study published by Beckel and Fisher in the International Journal of Environmental Research and Public Health also found that long-term remote work could lead to higher levels of loneliness and isolation, which is detrimental to mental health and that "the absence of informal social interactions can decrease employee morale and engagement" (Beckel & Fisher, 2022, p 18).

They do note that there are differences in the amount of negative psychological outcomes dependent on personal emotional stability, with more adverse outcomes for people with low stability, even if they appreciated the autonomy provided by remote work options (Beckel & Fischer, 2022). Lyzwinski concludes that managers should mitigate isolation and loneliness through new policies and increased contact with colleagues (Lyzwinski, 2024).



Natural sedation: Despite the massive increase in remote work on a global scale, especially following the Covid-19 pandemic, research is somewhat sparse on the mid- and long-term physical effects of telework. There are however studies that indicate the need for more managerial input and influence on the physical working conditions of telecommuters, including incentives to become more physically active, like sponsored gym memberships or period reminders to stretch, walk, breathe and move, like humans inarguably should.

Through a study on possible negative effects on mental and physical well-being of workers during the Covid lockdown (where commuting to work was a non-option), Barone Gibbs et. al concludes that "Workers who were remote before and during the pandemic had greater increases in non-workday sedentary behavior and stress, with greater declines in physical functioning." (Gibbs et. al, 2021, p 1).

Beckel and Fischer note that some studies show lower blood pressure in general among those working remotely, but comments that "reduced blood pressure for teleworkers may be due to reduced physical activity, rather than reduced stress" (Beckel and Fischer, 2022, p 13).

The shadowy sides of mixing work/life: Improved work/life balance is both a core effect and a main target for many of the people choosing to work from home, but it's not a universal result. Covid regulations aside, some people are forced to work from home or hybrid with detrimental impact on their work/life balance. The constant accessibility enabled by technology can lead to longer working hours and the expectation of being available beyond traditional office hours.

A major contribution factor to a worsened work/life balance is the ability to set physical boundaries between the two. In other words: Have an office at home to keep children, spouses, pets and other distractions at arm's length.

Pillai and Prasad essentially state that distractions caused by other family members in close proximity affected work-life balance negatively during remote work, and that additional stress resulting from the constant need to manage work and family dynamics led to increased attrition (Pillai & Prasad, 2023), whereas Galanti et al. concludes that "Employees may decrease their engagement, with weakened work motivation when their work setting becomes more distracting", albeit slightly less post the Covid-19 pandemic than under it (Galanti et al., 2021, p 430).

At the mercy of megabits: Working from home in the digital age is synonymous with being up, close and personal with technology. This reliance, while providing somewhat new and almost limitless possibilities, also serves up a whole new set of challenges, from technical issues (which often require more tedious remote support), the need for constant connectivity and the ever-growing, looming threat of cybersecurity concerns.

In their 2023 study, Nwankpa and Datta found that the uptick in cyber threats associated with remote work might force employees to reassess and align themselves with another layer of responsibility (Nwankpa& Datta, 2023).

A fourth major challenge, which will perhaps be less impactful over time as Gen Z enters the workforce, is the need to be provided the necessary digital tools to achieve productivity, and master them. According to studies by Babapour, Hultberg and Yamms, remote workers suffer under "a lack of access to the right technical support, infrastructure and tools, in addition to a sudden need to learn many new tools and ways of working in a short time span, created stress for some and raised awareness of the lack of digital skills in general" (Babapour, Hultberg & Yamms, 2021, p 6), forcing a face-off with a very steep learning curve resulting in "technostress", which can lead to reduced job satisfaction (Beckel & Fisher, 2022).

Unmute or read my lips: By nature, digital communication tends to eliminate nuances, resulting in misunderstandings and communication delays, and subsequently hinder the effectiveness of project work involving multiple stakeholders.

Another main factor is the negative effects of reduced social interactions. Studies by Beckel and Fisher (2022) found that the longer people worked from home, the less connected they felt with their co-workers (especially the ones still going to the office) and had a hard time forging new collegial relationships beyond the ones they had before they switched to remote work. As a result, the social support network of remote working employees could gradually wither away. Group chats and social media friends are poor substitutes.

From a purely practical perspective, remote work also raises the bar for employers when it comes to communicating expectations and (dis)confirmations. During the Covid pandemic, 39.6% of the employees experienced communication issues with their company, which can negatively impact the

development of expectations, which in turn will have a negative impact on employee satisfaction levels (Carraher-Wolverton (2022).

This is also supported by a 2021 analysis by Yang et. al. of work habits of around 61.000 Microsoft employees, which found that "firm-wide remote work caused the collaboration network of workers to become more static and siloed, with fewer bridges between disparate parts. Furthermore, there was a decrease in synchronous communication and an increase in asynchronous communication. Together, these effects may make it harder for employees to acquire and share new information across the network." (Yang et. al, 2021, p 1).

A less than stellar communication protocol, lackluster feedback loops and subsequently reduced employee satisfaction over time can effectively negate many of the upsides otherwise gained from remote or hybrid work options, including innovation and productivity.

An interesting side note: Executives are nearly three times as likely to prefer working at the office compared to their regular employee counterparts, which has lead some sociologist wary of a future where hybrid workspace opportunities will lead to a two-tiered workplace, with leadership staying at the office (and reinforcing camaraderie), somewhat leaving other employees behind (Pandey, 2022).

Few employees need paranoia added to their list of concerns.

2.5 Weighing the pros and cons

Albeit far from a new phenomenon, remote work became a global reality under the strict social distancing policies enforced during the Covid-19 pandemic.

In its modern form it presents a complex array of benefits and challenges that have fundamentally shifted the traditional workplace paradigms, and will continue to do so for the foreseeable future, even as the remote work-prone Gen Zers gradually come into positions to set policies and precedents. While remote work advantages align closely with increasing employee autonomy, job satisfaction, productivity and environmental sustainability, its disadvantages highlight issues related to isolation, mental and physical well-being, technological dependency and communication.

This constantly shifting balance raises a number of questions for both employers and employees.

Although the employee benefits are plentiful and tempting, they might be short-sighted from a corporate sustainability perspective. Few humans have the innate ability to stay focused for extensive periods of time without external reinforcement, and the increased productivity from remote work will usually need collegial or leadership input, something that's most effective in face-to-face interactions.

At the same time autonomy is an increasingly valued element for the current and incoming generations of workers, and the ability to balance personal and professional lives has proven to lead to an improved sense of well-being and reduced turnover rates. The latter is a genuine concern related to gen Z employees, who are more likely than their older peers to always be on the lookout for greener pastures (Press, 2024).

This lack of control is undoubtedly frustrating for a number of companies, especially those funded on more traditional business models, where being able to closely monitor employees is seen as key to growth and productivity. Knowing that potential physical and mental issues can arise from allowing their employees to pick and chose working hours

makes changing the operational status quo a daunting task, both strategically and practically.

The default middle ground is too often a “always on” mindset, where employers balance their employees’ choice to work from anywhere with the mindset that it’s ok to reach out anytime. Which is easy to do, easy to initially accept and unfortunately very habit-forming.

Blurred lines between work and personal life, made inescapable by an “always-on” mindset poses significant risks to employees’ work/life balance. Reports by global remote work enthusiasts Buffer (2023) acknowledges that many remote workers struggle to set boundaries, often resulting in increased work hours and potential burnout.

Offering options to work remotely, full time or part time, is a double-edged sword. The challenges, both purely operational and theoretical, are plenty. Issues related to social isolation, mental and physical health, work/life balance, technological dependence, and communication each demand their own studies, approaches and solutions by trial and error. They also vary between regions, industry segments, age groups, digital literacy levels, genders, types of organization and more.

The key to navigating this complex landscape lies in striking a balance between leveraging the advantages of remote work while actively mitigating the downsides. This requires joint efforts from both employers and employees to develop new norms, policies, and practices that support a healthy, productive, and inclusive remote working environment, ensuring a balanced approach.

Personal and individually tailored change management is ideal, time-intensive and costly as it might be. It will most however likely be helped by the gradual increase in digital literacy among the general global population as the new generation of digital natives gradually overtakes the workforce.

WORKING 9 TO 9: Blurred work/life lines often stem from an “always-on” mindset. A sign of the times, yes, but it’s not always voluntary.

2.5.1 Automatic for/against the people: The rise, risks and rewards of emerging tech

The history of Artificial Intelligence (AI) is a roller-coaster of intellectual exploration, marked by ambitious dreams, practical breakthroughs, doomsday scenarios and silver linings. In many ways it is a testament to human creativity, technological ambition, and philosophical inquiry. In other ways it is the epitome of human folly.

It can save the world. It can also wreak havoc on society as we know it. It all depends on how well we understand how it works, what it is, what it can be, what it can and can't do and what any potential results will mean for humans.

More specifically: The work we do, the work we'd rather not do, the work we'd prefer to do and the tasks we have no perceptual way of taking on at the present.

2.5.1.1 The potential of endlessness

Whereas AI-driven tools like ChatGPT and Dall-E (both by OpenAI), Gemini (Google) and CoPilot (Microsoft), among dozens of others, have exploded in popularity and (in)famy in as we approach the mid-2020s, we have only begun to scratch the surface of what they can do, produce and lead to.

The advancement of these technologies are also progressing at breakneck speed, with major expansions and upgrades introduced every week, month and year.

The first AI was introduced in 1950; it was a remote controlled mouse that was able to find its way out of a labyrinth and could remember how. By 1994 it could play backgammon reasonably well, and by 2022 it had the capability to solve complex mathematical problems at college level (Roser, 2022).

This is when it becomes interesting and/or scary.

AI is a tattered landscape with almost countless factors contributing to a very complex development field, but society as a whole has already begun to reap the benefits, especially when it comes to the processing and analysis of large data sources.

According to Tomašev et. al, "advances in machine learning (ML) and artificial intelligence (AI) present an opportunity to build better tools and solutions to help address some of the world's most pressing challenges, and deliver positive social impact in accordance with the priorities outlined in the United Nations' 17 Sustainable Development Goals" (Tomašev et. al., 2020, p 1).

2.5.1.2 The greater good: Global benefits

Initiatives to use AI for the greater societal good have been active since the early 2010s, and there are several indicators that it can indeed benefit humanity on a larger scale.

They mention concepts and programs like helping to train human moderators to identify and quantify online abuse against women, automated monitoring of viral disease, assisting with establishing electronic agricultural marketplaces, gather data and analyze best-effort help initiatives in conflict zones and, coordinate collaborative efforts between machine learning and climate specialist in the field of climate informatics to improve predictions (Tomašev et al., 2020).

It is also lending a valuable helping hand in otherwise very complex science fields - domains that otherwise would narrow the number of available human specialists and subsequently slow down research - by processing vast amounts of collected data and simulating outcomes that would otherwise imply either human danger or intrusive and potentially destructive effects on the environment. Examples include predicting global warming- and cooling events, exploring the universe of possible

formulations for chemical processing and synthesis of transitional metal elements (like iron, copper and platinum) or going beyond visible art to excavate preliminary sketches concealed under finished works from great masters (Eisenberg, 2022).

It has also proven its worth in medical science, where AI algorithms can analyze medical imaging faster and often more accurately than human radiologists, improving the diagnosis of threatening diseases and helping create personalized treatment plans based on unique health data, as well as accelerate new drug developments and therapy methods and their potential outcomes (Lee & Yoon, 2021).

2.5.1.3 A better me: Personal benefits

Scalable and versatile as it is, AI already contributes to personal gains and benefits, perhaps already more than we are aware of, through both direct assistance and frameworking.

The smart speaker in your living room you intermittently yell at to avoid looking out the window to check for rain? That's AI. Your car telling you to drive north when you're headed west due to traffic jams? That's AI. Your bank's chat bot telling you you're not eligible for another mortgage on your garage? Believe it or not, also AI.

It also goes deeper under the radar, for better or worse. AI is already the determining factor for what you see on social media, which products are shown to you in online shops and your YouTube recommendations. And increasingly, the bots are not just recommending the media we consume, but creating it based on their capacity to generate images and texts (Roser, 2022). That might sound

Acronyms anonymous

Both terms have exploded in popularity and occurrence in everyday speech since 2022, but what is the difference between Machine Learning (ML) and Artifical Intelligence (AI)?

Artificial intelligence (AI) is essentially what the name suggests - enabling machines to emulate human logic and intelligence for task evaluation and execution.

Chances are you've already encountered AI, perhaps without even knowing it, by using voice assistants like Siri and Alexa, which are built on AI technologies, or some form of automated customer service chatbots that offer guidance on websites.

Machine learning (ML) is more the underlying principle of AI, but falls under the same umbrella.

It allows for the creation of AI through models capable of learning from data patterns autonomously, without the need for explicit human instructions.

The sheer scale and intricacy of data being produced today is already well beyond what humans can handle and have not only amplified machine learning's capabilities, but also underscored its necessity.

(McKinsey, 2023)

scary from a certain point of view, but few would argue that it hasn't made life easier from a pure consumer centric standpoint.

The list of uses for AI and associated emerging tech branches is long, and will continue to grow until a point where it is fully integrated in most aspects of everyday life.

It will likely be further propelled by public adoption, as consumers are increasingly demanding differentiated, personalized, and responsive services, with secure flexibility as smart apps and devices become more and more widely available (Lee & Yoon, 2021).

2.5.1.4 Easy does it: Work benefits

Although AI, ML and generative technology in general has slowly worked its way into everyday life and society, it has been welcomed with open arms by large portions of various business segments and industry sectors, and for good reason: According to McKinsey's 2023 study "The State of AI in 2023", the expected business disruption from gen AI is significant, and respondents predict meaningful changes to their workforces.

Their surveys found that 79% of all respondents, including both corporations and employees, reported at least some exposure to AI in their work, and 22% reported using it regularly for work (McKinsey, 2023). It has risen quickly in recent years: 22% of companies reported using AI in 2018, whereas 50% reported using it in 2022 (Beauchene et al., 2023).

It's not hard to see why: Once AI tools are used regularly and people see result gains from it, they become go-to tools fairly quickly. A 2023 study by BCC surveying 13.000 executives and employees in 18 countries, showed that regular users of generative AI are much more optimistic than non users (62% vs. 36%) (Boston Consulting Group, 2023).

But what are the actual gains? According to studies by FlexOS, increased productivity ranks at number one, with 81% of Generative AI users claiming it has improved their productivity, and 43% claiming significantly so. Less than 1% said it decreased productivity. The "efficiency" denominator covered time savings, easy to use tools, more work being sone and arguably most important: Better work quality and improved accuracy (van Rossum, 2023).

2.5.2 Beware the robot overlords

Just as there are praisers and worshippers of AI, there are naysayers and doom prophets. It is easy to argue that it provides a boon for society as a whole, but there are cracks in the facade, and further use and development will require meticulous scrutiny and checking as technology progresses.

Ironically, the most ardent supporters and embracers of AI, Gen Y and Gen Z, are the most vulnerable for blowbacks from it in the future, as among Gen Z and Millennials, 71% use Generative AI at least once a month, and over half use it at least weekly (van Rossum, 2023).

That does not mean everyone who uses it is at ease. Despite 71% of respondents saying that the benefits outweigh the risks, 79% support AI regulation initiatives, which is contradictory to the traditional laissez-faire ethos that prevailed in the early stages of the digital age (Beauchene et al, 2023).

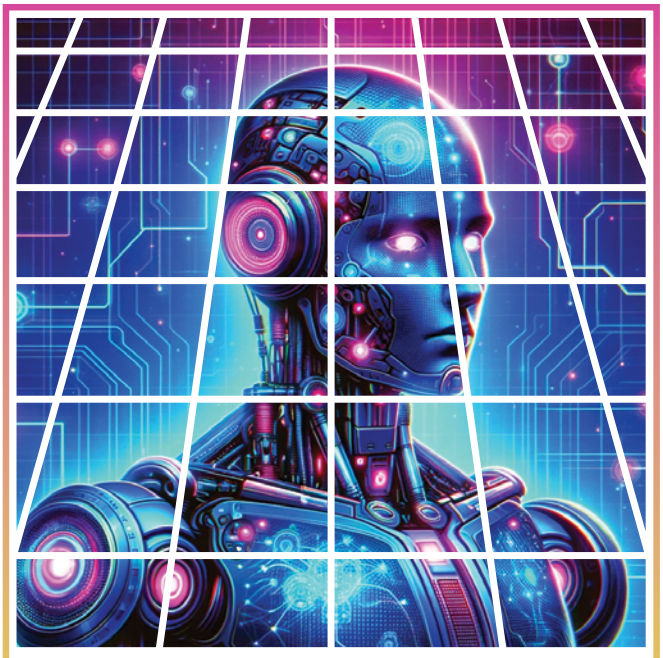
Does it pose a risk for job security and the potential elimination of certain human careers in the future?

Many fear it will, though how big the impact will be is uncertain. In a 2023 LinkedIn survey, 55% of LinkedIn members globally foresee their jobs changing to some degree by the rise of generative AI, and many feel that they do not get the proper training or reeducation to make that transition (LinkedIn, 2023).

Long gone are the days when we thought robots would take care of all the manual labor and we would be sitting in the shade, sipping Mai Tais and discussing philosophy. A study by the Organisation for Economic Co-operation and Development indicates that white collar- and high skill level jobs are the ones most affected by generative emerging tech, including business professionals, managers, science specialists, engineers and professionals in legal, social, and cultural fields.

How much they are affected depends on their digital literacy levels, where workers with robust digital competencies are more likely to leverage AI technologies to their advantage and reap the benefits they offer (OECD, 2021). Their report also adds that "AI is associated with lower growth in average hours worked in occupations where computer use is low.

On the whole, these findings suggest that the adoption of AI may increase labor market disparities between workers who have the skills to use AI effectively and those who do not. Making sure that workers have the right skills to work with new technologies is therefore a key policy challenge" (OECD, 2021, p 1).



AUTOMATRONS INBOUND:
Artifical Intelligence will soon be a part of close to all aspects of modern life. The question is whether it is coming to us, or for us.

This notion is supported by several scholars, including Chatterjee and Dethlefs, who boldly state that "to protect mankind against malicious use of AI models and prevent them from becoming our worst enemies, it is up to tech companies who are creating such powerful models to also step up and provide solutions to manage their potential misuse" (Chatterjee & Dethlefs, 2023, p 3).

2.5.3 Weighing the facts and odds

Technology has always been, and will always be, a pendulum for society. The implications of by whom, when, how, where and why we use it will sway from zero to a hundred, between apocalypse and utopia, by force, naivité and blindfolded, across the globe for as long as we manage to keep the planet alive. Artificial Intelligence might by all accounts just be one of the most significant and profound technological shifts in generations, and we have only dotted the outline of what the end results may be.

The reason why it's looking to be so impactful is that it transcends almost all layers of society, from welfare to science, medicine, personal well-being, culture, professional productivity and philosophy, forming the perfect battleground for dilemmas.

AI's contributions to societal improvements is the near perfect example of leveraging technology for the betterment of global sustainability. Initiatives to monitor crop and livestock disease and facilitate viable marketplaces shows how AI can contribute to eternal challenges like food security and economic stability, with the positive social ripple effects that can follow.

Then there's ethics, and one of humanity's greatest fears: Replacement. The fear of job displacement, fueled by AI's ability to automate complex tasks, challenges traditional notions of work, productivity, human effort and the value of self-worth.

We are already seeing the outline of the outcome, where AI can effectively widen the gap, or socioeconomic divide, between the have and the have-nots, the digitally inclined and soft-skill workers (OECD, 2023). It not only highlights the need for strategic education changes and re-skilling programs, but might imply excessive top-down regulation to mitigate workforce obsolescence.

The possible divide does not simply pertain to economic differences, but access to the data AI is built on itself. For an AI model and framework to be balanced and universally beneficial, it needs diverse, inclusive and multi-factored data sets to build on.

One might argue that the core programming of AI models will help prevent these gaps from widening and malice to prevail, but that will require strong international regulatory policies and ethical guidelines; both of which have a historical tendency to waiver in the face of more tangible value creation (like money). The complexity of AI systems, coupled with their potential for surveillance and data misuse, demands transparency and accountability from developers and policymakers alike.

Such measures can mitigate these risks, safeguarding individual rights and promoting societal welfare.

The inescapable journey towards an AI-driven future calls for a collaborative approach across all fields and segments, to harness positive impacts while vigilantly guarding against its threats. This collective endeavor is crucial in steering AI development towards outcomes that are equitable, ethical and aligned with the broader aspirations of humanity.

ARTIFICIAL EVERYTHING? Artifical Intelligence is already a major part of several industry segments, and more are coming. We need plan for the long term while still we can.

Rethink, reboot and repeat

Lars Bratsberg has been on the barricades for conscious technology use for a quarter century.

He has bumped fists with top brass at Google, championed a cautious embrace of the digital age and adviced thousands on how to maximize the benefits of online presence.

He's also a strong advocate of disconneting .

Humans are fickle, sensitive and depend on certain biological rhythms to make the most of our everyday lives. Whatever impressions we absorb throughout the day need to be subconsciously analyzed and processed into beneficial blueprints for the future. That's how knowledge becomes wisdom, and wisdom makes for conscious choices. It is a core trait of all humanoid bipedals.

During the last 15-20 years of the current technology timeline, the importance of those processes has become slightly obscured by flickering screens and data-driven convenience. We used to look people in the eye, pay close attention as we amassed knowledge, and sometimes just stare vacantly into thin air, reflecting and taking the time we needed to shape long-lasting experiences.

What happens when we become blinded by the shiny encompassing realities of the new digital age, and deviate from our natural cycles? **Lars Bratsberg**, author, former part of Google's leadership team and digital business growth aficionado, has some thoughts.

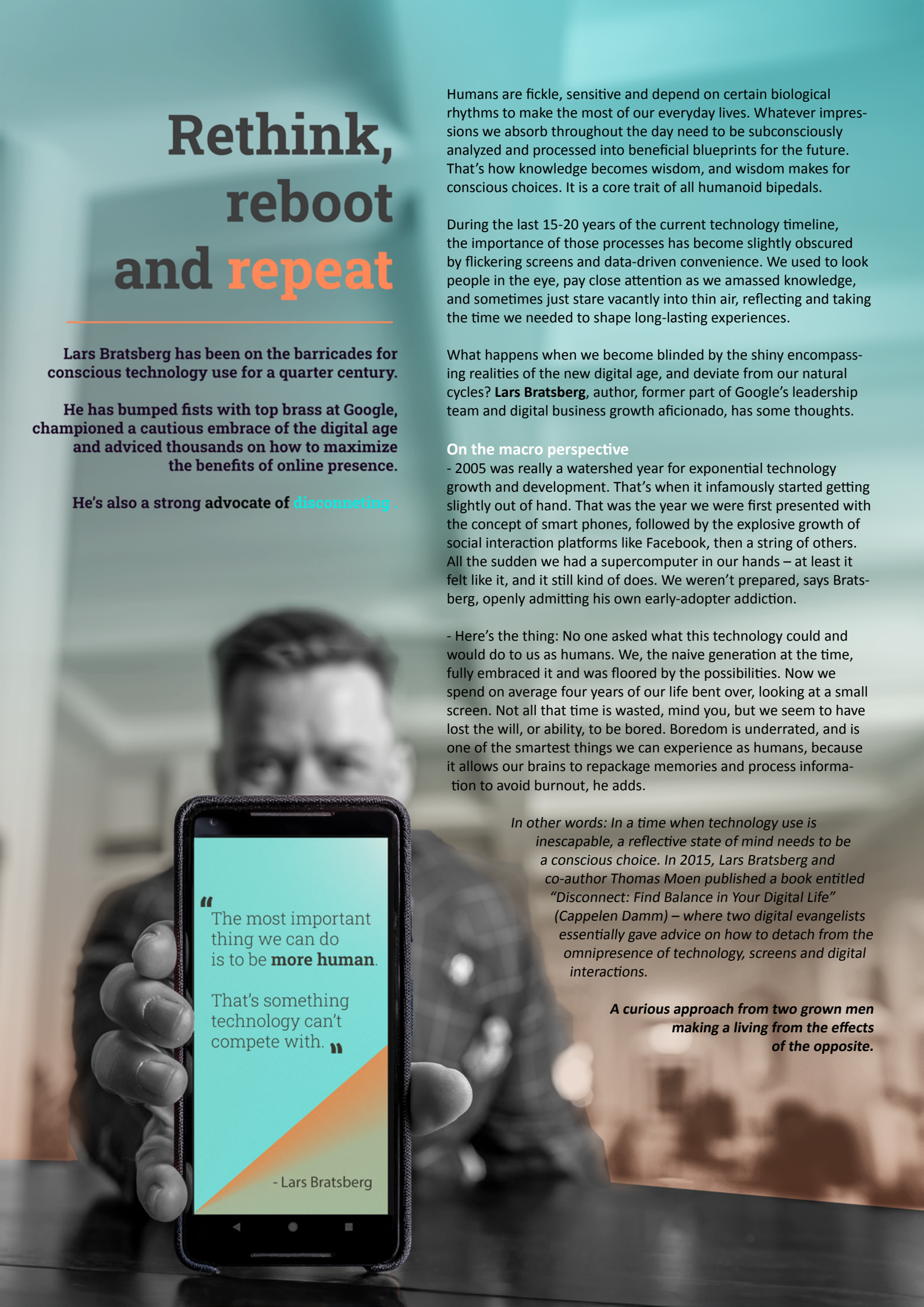
On the macro perspective

- 2005 was really a watershed year for exponential technology growth and development. That's when it infamously started getting slightly out of hand. That was the year we were first presented with the concept of smart phones, followed by the explosive growth of social interaction platforms like Facebook, then a string of others. All the sudden we had a supercomputer in our hands – at least it felt like it, and it still kind of does. We weren't prepared, says Bratsberg, openly admitting his own early-adopter addiction.

- Here's the thing: No one asked what this technology could and would do to us as humans. We, the naive generation at the time, fully embraced it and was floored by the possibilities. Now we spend on average four years of our life bent over, looking at a small screen. Not all that time is wasted, mind you, but we seem to have lost the will, or ability, to be bored. Boredom is underrated, and is one of the smartest things we can experience as humans, because it allows our brains to repackage memories and process information to avoid burnout, he adds.

In other words: In a time when technology use is inescapable, a reflective state of mind needs to be a conscious choice. In 2015, Lars Bratsberg and co-author Thomas Moen published a book entitled "Disconnect: Find Balance in Your Digital Life" (Cappelen Damm) – where two digital evangelists essentially gave advice on how to detach from the omnipresence of technology, screens and digital interactions.

A curious approach from two grown men making a living from the effects of the opposite.



On the benefits of digital detox

- Personal references made us write that book, and since then I have gone through periodic technology detoxes to try to stay focused in this fast-paced digital age. Digital detoxing, sometimes for a few days, sometimes longer, has made me realize how tech overload is detrimental to human interactions. It's extremely impactful, because the dopamine you get from screen fixation is so strong, you'll lose an hour in an instant, he admits.

- For those who are up to the detox challenge: It's a great experience, and you will survive it. Create your moments. Take the dog for a walk. Leave the phone. Take the bus and gaze out the window. Tune things out. Balance comes from a selection of small moments.

- A simple thing like setting timers on certain apps can be a good antidote to the digitally driven detriment of human mindfulness, says Bratsberg, confident from experience.

Counteracting the pressure, and benefits, of present trends with common sense and physical, psychological and productive needs is a balancing act. Despite his career and essentially pro-technology stance, Bratsberg does his best to approach it from the outside in.

On the plus sides and down sides

- I'm a technology optimist and appreciate how technology can help us do things that we otherwise could not, or help alleviate tedious and boring tasks; those are good things. To be able to work remotely, hold presentations, attend meetings and so on is a break from old patterns, but humans have managed to adapt to new technologies for centuries. I'm sure we'll do it again. My generation got the first-hand experience, and we clearly fumbled; look at us, Bratsberg says, convinced that the next generation will rectify both use patterns and be aware of the dangers of mis- and overuse.

- The kids now - the new generation - has already realized what this interactive technology is and how it can be a trap; we didn't. They self-rectify themselves, have less trouble putting it away and balance their focus. That to me is proof that humanity will once again adapt.

Promising as that might be, it still begs the question how businesses and corporations will follow, as there is money to be made and advantages to gain from interlacing as many parts of everyday lives with technology as possible. That's Bratsberg's main bread and butter, and he firmly believes companies themselves will adjust. Partly because they want to, but also because the next generation will demand it.

On the shifting weight of values

- Humans are self-adjusting, but I think that businesses have a task at hand when it comes to setting guidelines and boundaries around the technology they provide to their employees - phones, laptops and more. They are supposed to be tools to get the job done, but that does not mean the job is 24/7. The workforce generation that's stepping up now have a vastly different outlook on what constitutes value and happiness. They often value extra vacation time over high salaries. They care about their carbon footprint. They cherish globalism and purpose, and they are conscious about work/life balance, emphasizes Bratsberg.

- That is an indication that digital technology is gradually shifting from being a prerequisite for personal success. They are tools, and history has shown us that as tools change, we adapt accordingly. First by eager embrace, then dialing back through optimization. I think that as values shift and the tools become norm, people will leave their laptops at the office more - not be on standby at all hours, like our generation was when we first approached these tools. It's a fundamental shift, and businesses will benefit more from adapting to this new perception of values, tools and sustainability, he concludes.

Lars Bratsberg is the former Industry Leader Hong Kong for Google, co-founder of Growth Tribe and the founder of D3, a consultancy firm focused on digital due diligence. He co-authored the book "Disconnect - Find Balance in Your Digital Life" (Cappelen Damm, 2015) and has over 25 years of experience from marketing, digitalization and communication domains.

The **human** aspect

The human aspect

Digitalization's double-edged sword:

Challenges and benefits for humanity

We live in a society where the organizational and functioning load of our country, community and neighborhood depends on all of us chipping in and putting in work. Not just to create value, but to even remotely stay sustainable.

To sustain the welfare state we all have to participate and work towards the common good in one way or another. The key to building on and improving the status quo (and not repeat old mistakes) is to maintain a stable workforce, in terms of age, genders, numbers, physical and mental human restrictions and just the right amount of freedom for everyone.

Addressing factors that lead to fluctuations in the workforce is therefore crucial, and requires knowledge and understanding.

The main question is: How can we keep every aspect of the workforce stable in the face of challenges both at work and outside working hours?

Norway, being a nation of early technology adopters and otherwise fairly average workforce numbers, is a good starting point for analysis. In Q3 2023, approximately 70% of Norwegians of working age were employed, while about 7% were on sick leave. The number of recipients of disability benefits relative to the population was 10.4% as of end-of-year 2023 (Statistics Norway, 2023).

Although the numbers are arguably acceptable, the trend seem to be shifting towards an increase in the proportion of young disabled individuals. At the same time the number of seniors transitioning out of the workforce is rapidly rising.

Could this be linked to our digital age and how we approach work?

Workplaces in general are undergoing significant changes due to factors such as globalization, technological advancements, climate change and shifting demographics. Approximately 40% of us now have the ability to work remotely, either regularly or as needed (FAFO, 2023).

The computer screen is front and center for most of us either way, regardless of whether we are at the office or not. These changes can create opportunities for skill development and new jobs, but also present challenges to overcome (Norwegian Institute of Public Health, 2023).

The Covid-19 pandemic accelerated changes in how we work, in particual related to an increase in the use of digital tools for collaboration and off-site or hybrid working conditions.

Remote work offers benefits like flexibility and reduced interruptions, but it also poses challenges, including but not limited to communication issues, ergonomic concerns and difficulties in managing work-life balance (Norwegian Institute of Public Health, 2023). It is crucial to ensure that work remains conducive to good health amidst these transformations.

This shift raises a lot of questions, especially about how it affects our physical and mental well-being.

Do using digital tools and having flexible work conditions impact our health? And if they do, to what effects?

3.1 The physical toll of digitalization: Navigating health challenges

Research has documented that the extensive use of digital devices, such as smartphones, tablets, and computers, can result in an increased risk of various physical problems.

3.1.1 Digital Eye Strain: The effects of screen use on vision health

Visual disturbances refer to various anomalies or changes in normal visual perception. Extended use of digital screens can result in digital eye strain, e.g "computer vision syndrome" (Blehm et al., 2005). To mitigate discomfort, many of us are using screen glasses or computer glasses, often provided by our employers to support prolonged screen use. The adoption of screen glasses is on the rise.

According to an article in The Great Norwegian Encyclopedia (SNL), the use of vision aids like glasses or lenses in Norway has increased from 57% in 2005 to 79% in 2020 (Klette, 2020), suggesting that the issue is prevalent, but being recognized and addressed.

3.1.2 Sleepless in the digital age: How screens steal your Zzz's

Sleep problems related to digital media use have become a common concern in today's tech-savvy society. Spending more time on screens, especially before bedtime, can harm our quality of sleep.

The blue light from screens can interfere with the body's production of melatonin, a hormone that helps regulate sleep, causing sleep disruptions (Chang et al., 2015).

This disruption can make it harder to fall asleep and reduce the overall quality of sleep (Chang et al., 2015).

Having digital devices like smartphones and tablets in the bedroom can disrupt bedtime routines, prolong screen use, delay sleep and reduce sleep duration (Levenson et al., 2023; Gradisar et al., 2013).

Teenagers who spend more time on digital media, including social networking sites, are more likely to have sleep problems, such as shorter sleep duration and more sleep disruptions (Hysing et al., 2013). International studies also link screen use with poor sleep in both young children (Janssen, 2019) and adolescents (Carter, 2016).

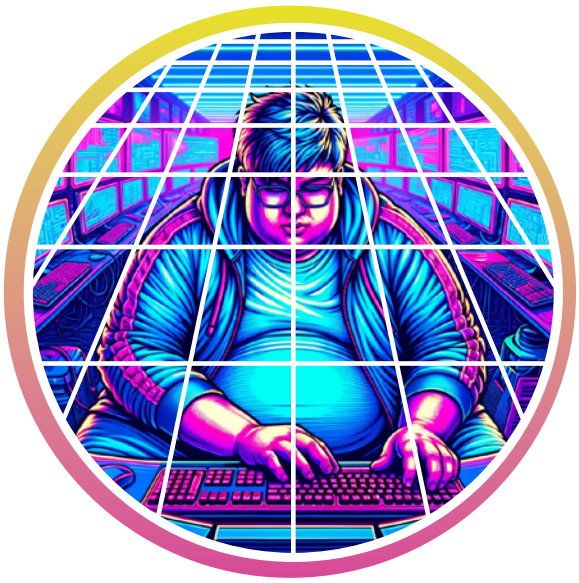
The Norwegian Pharmacy Association (NFA), using data from Farmalog's medication statistics, studied the usage of prescription sleep aids from 2012 to 2021. In 2020, there were over 456.000 people using prescription sleep aids in Norway alone.

While the proportion of adult users remained stable over the past decade, there was more than a doubling in prescription sleeping pill use among young people during the same period (FHI, 2021).

There are several medications used to improve sleep and the usage has significantly increased from 2018 to 2021, with a per capita consumption increase by almost 10% (Kanestrøm, 2022).

Melatonin accounted for 99.8% of this consumption in both 2012 and 2021 (NFA, 2022). There has been a substantial rise in melatonin use among our children and adolescents. For the age groups 0-10 years and 10-20 years, consumption increased by 175% and 156% respectively.

Consumption also rose considerably by 103% among individuals aged 20 to 30 years old (Kanestrøm, 2022). In other words, there are many of us needing assistance to actually go to sleep, but we still bring our smartphones to bed.



THE FAT OF THE LAND: The world population is growing ever more obese, and to a large extent digital lifestyle is to blame. But can is also be used to mitigate the issue?

3.1.3 Weight fluctuations: The digital dilemma of gaining and losing pounds

Overweight is a growing problem in society on a global level, and no clear explanation or treatment for the problem has been found. Some argue that it is genetic, while others point to hormonal balance, explain it in terms of food intake of sugar and fat and low activity levels, and still others highlight differences in metabolism.

So far, no one has found the right explanation or treatment for the cause. But what we do know is that obesity doesn't happen overnight; it builds up over time, and more and more people are dealing with it. Understanding the factors that lead to obesity is far beyond what this master's thesis can address. However, if we look specifically at how much we use digital devices, there's research that can help us better understand this connection (Speakman & Sørensen et al., 2023).

Obesity and computer use seem to be linked, with various factors affecting this connection. Spending a lot of time on computers, whether for work or leisure, can lead to a sedentary lifestyle, which increases the risk of obesity (Sparling et al., 2017). When we spend too much time staring at screens, we often don't have as much time for moving around, and that can make us gain weight and become obese (Hills et al., 2001). Moreover, using computers can affect our eating habits, with some people snacking on unhealthy foods while working or browsing (Boone et al., 2007). A study by Sparling et al. (2015) highlights how sitting for long periods or engaging in low-energy activities can be harmful, especially for young people.

While using digital tools can pose problems for us, the digital world also offers many solutions to combat obesity and improve health.

There are plenty of online resources available, such as workout programs, dietary websites, web-based treatments, and virtual personal trainers, allowing us to exercise at home without braving the outdoors or going to the gym. Apps and smartwatches can track our daily activity to keep us motivated, and experts can provide personalized diet plans for a small fee. With so many options available it can be overwhelming to pick the right one, but an abundance of choice means there's something for everyone.

The challenge in society is to implement preventive measures to avoid further propagation of an already widespread condition. This largely concerns interventions that should be implemented in children from an early age, as there is a clear correlation between childhood obesity and a increased likelihood of adult obesity.

As our children spend more and more time on digital devices, it's important to figure out how to deal with this. There will be several factors to consider

in preventive measures - but we can start by realizing that letting them use digital devices too much probably won't stop them from gaining weight.

However, there are numerous studies suggesting that interventions can be implemented if the child is already overweight. Psychoeducation and online treatment have shown promise in addressing childhood obesity.

A 2022 UiS master's thesis focused on using digital tools to treat overweight children. Analyzing 14 articles on technologies like SMS, apps, and social media, the study found that most parents had positive experiences with these tools, finding them helpful and easy to use (Fidjeland, 2022).

The study concluded that digital health tech could empower parents of overweight children and recommended involving users in the innovation process to meet their needs (Fidjeland, 2022). The study states that "digital health technologies can be a suitable tool to empower parents of children with overweight and obesity. Including the user perspective both in the innovation process and in the support is recommended to ensure that the users' needs are met" (Fidjeland, 2022 p1).

We all want to be skinnier. We all want to be faster, smarter, more productive and pretty. Ironically, we want all of that while sitting in front of screens for most of our everyday lives.

We want quick fixes, and we are willing to pay for them to achieve a body ideal largely influenced by and to a highl degree constructed through digital media. Yet we search for solutions while still sitting sedentary in front of a screen.

3.1.4 From screens to strains: Adressing muscular issues in digital times

Diverse studies have investigated the prevalence of musculoskeletal injuries, illnesses, and issues in the population. These studies suggest a gradual increase or relatively stable prevalence of such conditions. Findings from the Trøndelag Health Study (HUNT) show that more and more people are reporting muscle or joint pain or stiffness each year (Brage, Ihlebaek, Natvig & Brusgaard, 2023).

This trend aligns with international studies and corresponds with lifestyle-related risk factors such as obesity, inactivity, and the general increase in life expectancy (Jahnel, 2022). The overall health loss in Norway due to musculoskeletal disorders has increased by 14% since 2006 (Natvig, 2023).

Prolonged and monotonous computer work can lead to musculoskeletal problems and the continuous use of digital devices can affect our ergonomic postures and movements. This can lead to musculoskeletal problems, such as Carpal tunnel syndrome, repetitive strain injuries and muscle tension in the neck and shoulders (Kim et al., 2016).

Several, like Foss et al., examine the influence of workplace risk factors on long-term musculoskeletal sickness absence. Based on a 5-year follow-up from the Oslo Health Study they found that working conditions and computer use made it more likely for us to be off work for a while due to muscle and joint issues (Foss et al., 2011).

There are also positive aspects of working with laptops, especially working from home where there are many possibilities to prevent prolonged computer work.

When working from home you can have shorter work days but still be as effective. By avoiding queuing in traffic and reducing stress each morning

to reach the morning meeting or to pick up the children on time from the nursery school we can reduce such factors well known to be associated with stress related muscular pains.

By having a laptop you might shift where you work from, being able to work outside and watching the sun rise than watching the bachead of a colleague desperately in need of a haircut.

It might also be easier to take breaks and move around without feeling that the boss og colleagues are looming over your shoulder.

According to the Working Environment ACT § 3-5, the employer shall have training in health, environment and safety work (HSE) and set focus on interventions to reduce the risk of musculoskeletal conditions (Tryggkurs, 2023).

These strategies might differ depending on the workplace and industry, but they seem crucial for cutting down on sick days.

The Health and Safety Executive (HSE) also emphasizes the importance of looking at back pain prevention and management in a broader way, considering not just physical factors but also mental and social ones.

Computers aren't the only things leaving us with stiff necks.

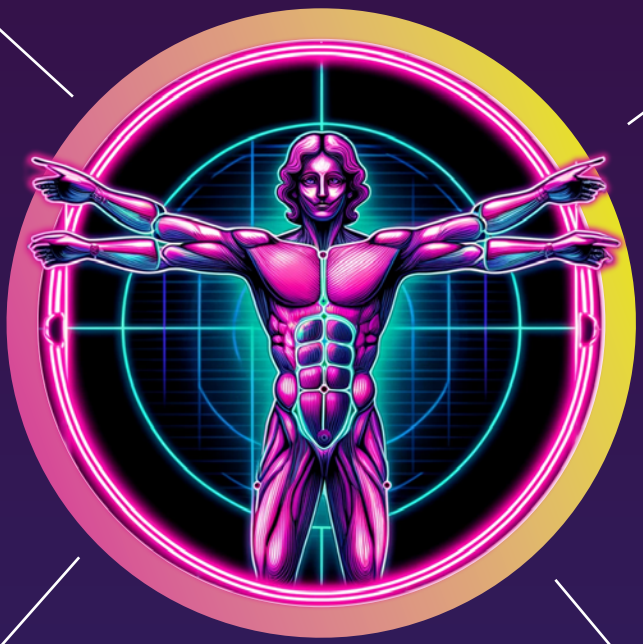
BACK (PAIN) TO THE FUTURE: More time in front of screens requires both employers and employees to invest in ergonomics, but self discipline is also important for a healthy mind, and body.

Reported muscular pain conditions
1995-1997: 45% • 2006-2008: 48% • 2019: 54%

The most significant increases were among ages 20-29, and socio-economic costs rose from 70 billion in 2009 to an estimated 255 billion in 2021 (The Norwegian Labour Inspection Authority, 2024).

Sleeping disorders

"Mouse arm" or Repetetive Strain Injury (RSI).



Poor posture

Disturbed eating patterns

Computer vision syndrome

Symptoms include eye fatigue, dry eyes, headaches, reduced visual acuity and risk for hypermetropia and/or astigmatism (Blehm et al., 2005).

Similar conditions related to uneven curvature of the cornea and these conditions can lead to issues during computer screen work (Gowrisankaran and James, 2015)

Carpal Tunnel Syndrome

A condition where "the carpal tunnel in the wrist becomes narrowed or compressed, leading to pressure on the median nerve, resulting in symptoms like numbness, tingling, pain or weakness in fingers" (Helsenorge, 2023.)

Prolonged use of digital devices with bad ergonomics can make things worse.

More screen, less lean:

How the digital age takes a toll on the body

Remember when parents told their kids not to sit too close to the screen? Those were the days. Now we are closer to bigger screens, more overweight, less mobile, have worse eyesight and in more pain than ever.

The proportion of adults with overweight and obesity has increased over the last 50 years. In the late 1960s, only about 5% of Norwegian men in their 40s were obese (FHI, 2023). The average weight has continuously increased since 1970. In ages 40-49 there has been a significant increase in both genders over the past decade.

Obesity decreased among women from the 1960s to the late 1970s, but from around 1980, the average weight increased similarly to men (Meyer & Tverdal, 2005).

3.2 Into the digital psyche: Mental health in the digital age

The study by Foss et al. emphasizes the importance of considering psychological and social factors alongside mechanical factors in understanding and addressing back pain in the workplace.

Together with musculoskeletal, mental disorders are responsible for the largest share of lost workdays in Norway (NAV, 2023). Sick days stemming from mental health disorders made up nearly 1.9 million lost work days, which is the equivalent of about 25% of all medically certified sick leave.

According to Hans Christian Holte, Director-General of the Norwegian Labour and Welfare Administration (NAV), these diagnostic categories have seen a steady increase in recent years (NAV, 2023).

Many are expressing feelings of "hitting a wall" or being "burned out," even asking for "mental health days." It seems like this is becoming common for some of us to view these days off as almost an "entitlement", often resulting in short-term work absences.

These sentiments stem from the pressure of trying to meet the demands of society, whether it's in the workplace or our personal life. Employees may find themselves overwhelmed by job demands, struggling to maintain a healthy work/life balance.

As a result, you may request time off to recharge, so you can continue to be a class representative or handball coach and focus on your mental well-being - and have time to work out.

This isn't exactly an illness, more like a little warning sign flustering in the winds of society - a small red flag. It's not quite mental health problems, not enough to call in 'legit' sick days at work - unlike mental disorders, which can cause long-term impairment.

Mental disorders accounted for approximately one-third of those receiving disability benefits and the proportion of individuals receiving disability benefits due to a mental disorder has increased by 7,3 % since 2000 (NAV, 2023). It seems like we're becoming increasingly mentally ill in this society.

Why do so many walk around in "the world's greatest country" unable to work because we are too anxious and/or depressed?

3.2.1 The intersection of depression, anxiety, and technology

Sleep problems and muscle issues have a big impact on mental health. Studies show that sleep trouble is a major sign of depression and a main symptom. Sleeping problems and pain can precede the affective episode, be part of the disorder and act as a maintaining factor (Elhai et al., 2017) - in other words: Core contributing factors.

Anxiety and depression symptoms are linked to both recurrent and prolonged periods of sick leave. Anxiety and depression also raise the likelihood of disability benefits due to somatic conditions (Knudsen et al., 2010; Mykletun and Øverland, 2006). The HUNT study found that more young adults were feeling anxious and depressed from 1995 to 2019, especially a significant increase between 2006 and 2019 (Krokstad et al., 2022).

Depression is a complex condition with numerous predictors and triggering factors that extend beyond what this master's thesis can address. Despite its multifaceted nature, there's growing interest in exploring the relationship between depression prevalence and our digital era.

Several studies have found a correlation between high digital device use, especially on social media, and increased prevalence of depression symptoms. This might be due to negative effects by compar-

ing ourselves to others, cyberbullying, and sleep disturbances (Primack et al., 2017; Twenge and Campbell, 2018).

Smartphones use can also be linked to anxiety symptoms, especially if we're on them all the time or feel like we can't live without them. Some of us may experience feelings of fear, loneliness, and stress when separated from our smartphones (Elhai et al., 2017) and the term "separation anxiety" might get a whole new meaning.

Constant digital media exposure can lead to "digital stress" (Smith & Robinson, 2019). Digital stress is defined as "the feeling of being overwhelmed and anxious due to the constant connectivity and information overload that digital technologies and the internet bring to our lives" (Smith & Robinson, 2019, p 2).

Digital stress primarily stems from "the incessant notifications, the pressure to maintain an online presence, and the fear of missing out (FOMO) on digital content" (Dempsey et al. 2019, p 3). Effects include heightened anxiety levels, reduced attention spans, disrupted sleep patterns, and a sense of being constantly "on call" (Rosen et al., 2013).

HARD TO PAUSE: In a world where even distractions are digital, it's harder than ever to switch off, tune out and turn in, and it's making us depressed.

The constant flood of emails, messages, and notifications can leave us feeling totally overwhelmed and stressed out (Barber and Santuzzi, 2015).

All this stress can lead to burnout, anxiety, and depression (Tarafdar et al., 2019). "Telepressure", another word for digital stress, described as feeling pressured to be available at all times, even off work (Sardeshmukh et al., 2012). It is the feeling of the pressure that you need to be available 24/7, even when we're supposed to be off the clock (Sardeshmukh et al., 2012). This can disrupt work/life balance and make it hard to log off, recharge and recover (Derks et al., 2016).

There's a lot of evidence suggesting that too much screen time can worsen feelings of depression. According to studies by Allam (2010), Amchai-Hamburger and Ben-Artzi (2009), Chen and Tzeng (2010), and others cited by Rosen et al., (2013) it's said we might find ourselves at a higher risk of depression when we spend a lot of time texting, watching videos, gaming, chatting and emailing.

American psychologist Johanthan Haidt points out that there has been a significant increase in mental health issues among adolescents, coinciding with the year 2012 when Instagram was launched (Haidt, Rausch & Twenge 2024). From 2012 to 2013, ages 10-14, prevalence increased by 67%. Haidt expresses great concern for Generation Z in his book "The Anxious Generation: How the Great Rewiring of Childhood Is Causing an Epidemic of Mental Illness" (Skretting, 2024).

Haidt has also looked at the condition in nordic countries and he points out that Norwegians seem to be following the same trends as those in English-speaking countries. Though results varied by study, anxiety, and depression rates have generally risen since the early 90s and have grown exponentially since around 2010.

This rise has been especially noticeable among younger people, and girls in their teens stand out the most (Haidt, 2022). Lu et al. found that depression was linked to both internet and text message dependency (Lu et al., 2011). Another study by de Wit et al. discovered that adults with major depressive disorder often spent too much free time on the computer (de Wit et al., 2011).

Those who use mobile phones excessively, sometimes referred to as "smartphone addicts", may be more prone to feelings of depression and anxiety.

This could involve spending too much time on the phone, feeling uneasy when it's not accessible and struggling to cut down on usage as found by Demirci et al., (2015) and Lee et al., (2019).

Rosen et al.'s research showed that spending a lot of time on digital media, especially social media, can lead to lower self-esteem and increased loneliness (Rosen et al., 2013). This might be because we often compare ourselves to others on social platforms and end up feeling bad about ourselves. According to Davila et al., "depressive symptoms were associated with quality of social networking interactions, not quantity" (Davia, 2012 p. 72).

In 1995-97, 15% of women and 12% of men aged 20-29 had symptoms of anxiety, **increasing to 32% for women and 19% for men in 2017-19** (Krokstad et al., 2022)

3.2.1.2 "Happy Pills"

Looking at medication use, there has been a noticeable increase in antidepressant prescriptions. According to Folkehelserapporten (2023), the largest increase is among people aged 30-34, with a 19% rise from 2019-2022; 30% increase among 15-19-year-olds (Folkehelserapporten, 2023).

In addition to anxiety and depression, we are seeing a rise in various mental disorders - such as attention hyperactivity disorder, pathological gaming disorder (Medietilsynet, 2022) eating disorders (Bartsch, Niederbacher & Spaniol, 2020), delusional disorders (Berry, Lobban, Belousov & Emsley, 2017); Collin, 2023); Garety, Kuipers, Fowler, Freeman & Bebbington (2001) and Primack et al., (2017) which are said to be linked to the development of our digital world.

To provide an illustrative example: Comparing 2016 to 2022, there were twice as many using ADHD medications as in 2021. Just between 2020 and 2022, the number of prescriptions for ADHD medications jumped from 58.732 to 81.639, following 15 years of steady growth (FHI, 2023).

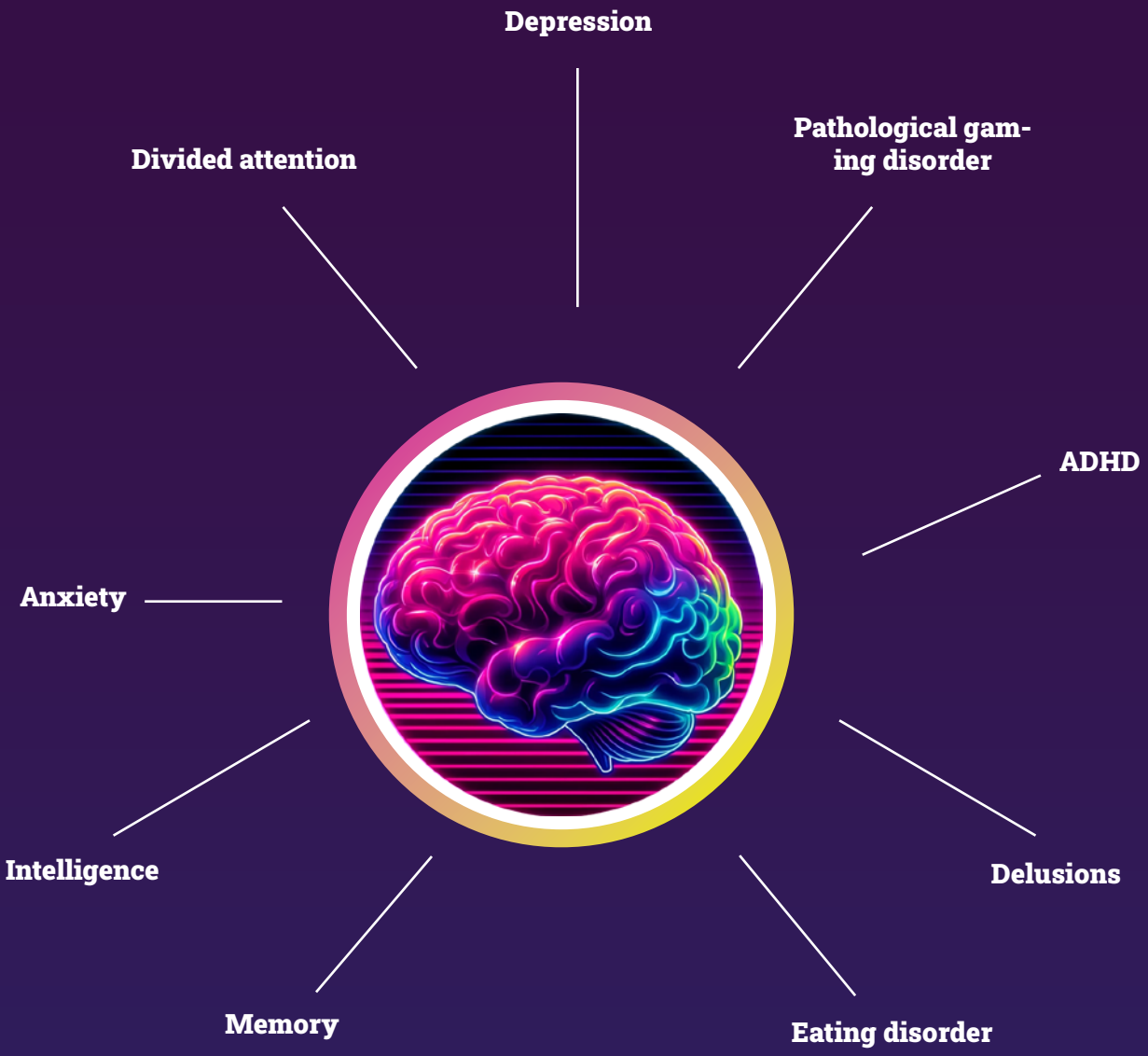
Although it is difficult to discern a clear correlation between mental health and digital devices, it is naive to assume that this will sort itself out.

Children and adolescents report more mental difficulties than before smartphones became ubiquitous, and we need to figure out how to turn this negative trend around if we are to retain the workforce we have and Generation Z, upon whom we rely to participate in the workforce in the future.

3.3 Digitalization: Friend or foe?

It's not that challenging to discuss whether screen usage leads to visual disturbances or not - we can see this clearly through our lenses. Some psychological disorders as e.g. pathological gaming disorder is dependent on digital tools to develop so the causality is not up to discussion.

However, other disorders associated with the use of digital tools, such as sleep difficulties, musculoskeletal problems, obesity, and mental health issues, can be easily scrutinized for direct causality.



Mind Matters:

Cognitive shifts in the era of digitalization

Will our brains evolve as a result of increased digitalization? Signs are pointing to yes.

"iDisorder" is a concept which refer to "changes to the brain's ability to process information and relate to the world due to daily use of media and technology resulting in signs and symptoms of psychological disorders – like stress, sleeplessness, and a compulsive need to check in with all of your technology" (Rosen, 2017 p.2).

Multitasking involves focusing on multiple tasks or stimuli simultaneously (Monsell, 2003). In today's digital age, with endless parallel activities, divided attention has become increasingly common.

It's not always a negative, though. Some studies suggest it may have positive effects under certain conditions, like the ability to develop better cognitive control and task-switching skills (Monsell, 2003).

It can also improve efficiency for simultaneous simple and multiple tasks, as demonstrated by Salvucci and Taatgen (2011) and Horrey et al. (2006). However, the benefits are context-dependent and may not apply universally.

An article by Ceramoglu addresses correlation between ADHD and media consumption (Ceramoglu, 2018), suggesting that ADHD is a significant risk factor for excessive use of digital devices, particularly among children with ADHD, affecting sleep, academics, attention and cognitive skills.

Memory is essential for learning, decision-making, and overall cognitive function (Baddeley, Eysenck, and Anderson, 2015). But will tech reliance change how our memory develops over time? The smart one would be the person who can navigate, understand, and effectively use the tools to solve problems - not the one with the photographic memory.

These various afflictions are closely interrelated, and comorbidity is substantial.

On a general basis, all the above presented conditions are on the rise and have significant implications for the Norwegian workforce. But the use of digital media can also be highly beneficial for our mental health. Being part of an online community can feel affirming when your voice is heard and you can be recognized in a safe forum where, e.g. in real life, you might hesitate to speak up.

For those of us who are lonely or have social anxiety, participating in an online group can make it easier to meet others in similar situations and, in a more secure environment, improving daily lives.

For the socially challenged, being part of a gaming team can provide a sense of belonging and a feeling of usefulness, with friends who share the same interests. If you don't win on the sports field, you can excel in esports.

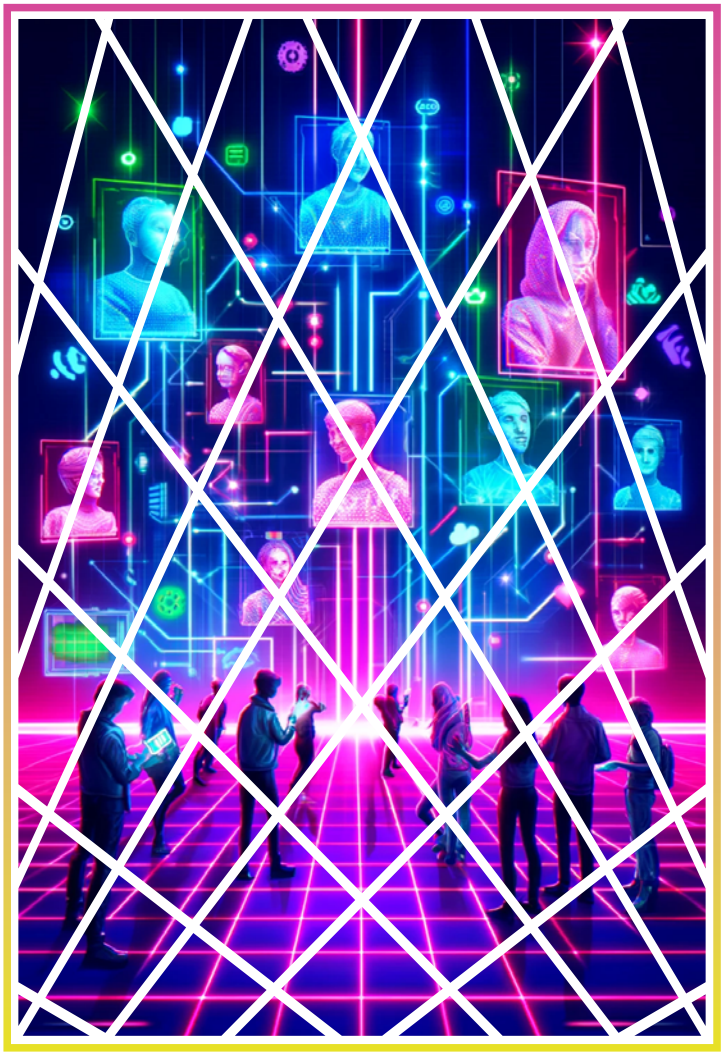
Digital technology offer tools that can mitigate psychological difficulties and be a solution to some other problems. Implementing highly beneficial and cost-effective measures could greatly benefit Norway's healthcare system, especially considering the economic pressure it's under and the shortage of specialist expertise.

If we are offering digital treatment, there can be a significant reduction in the number of hospital admissions and physical consultations - provided that the digital solutions are used by the right people in our population.

So, while there's a growing trend of physical and psychological health issues linked to the digital era, the digital tools at our disposal also provide us with ways to prevent and treat these conditions.

Does this even the score?

Using digital devices moderately isn't usually a problem for us or something that leads to impairment or making us mentally ill. However, it is the extent of available content, how easy it is to access everything on digital platforms, and the endless options for services and entertainment that can be challenging for us both as individuals and society as a whole.



ALONE TOGETHER: Being constantly connected is a blessing and a curse. It feeds anxiety, but can also be a much-needed outlet for people who otherwise shun social interactions.

HUMANITY

So, why is it important to address the human factors in this thesis? Well, we are humans, a species that is constantly changing and must adapt to its surroundings. We do not know how the digital age will affect our humanity, abilities and mental disorders.

We know we are good at adaptation, but it usually takes generations.

Today we find ourselves in the middle of an explosion of change that we must deal with all at once. Adapting to changes can be challenging in itself, and willingness to change is also an issue that needs our attention.

Technology plays a role in both physical and psychological conditions, which affects both work performance and life outside of work. It creates difficulties in maintaining our life balance, and leads to reduced ability to work. Children and young adults that are to become our new working generation report of more severe difficulty.

Will our mental health issues develop into other kinds of mental health diagnosis? Will everyone eventually use sleeping pills and antidepressants as a common way of living?

And finally, how will all of this and technology affect the development of social skills, intimate relationships, the sense of belonging, and presence in family life?

THE SEARCH FOR TRANQUILITY:
We humans are great at adapting lifestyles and needs to changes around us, but things are progressing so fast now that we might have to be a little more proactive to not crumble under pressure.

Technology is nothing. What's important is that you have faith in people, that they're basically good and smart, and **if you give them tools, they'll do wonderful things with them**.

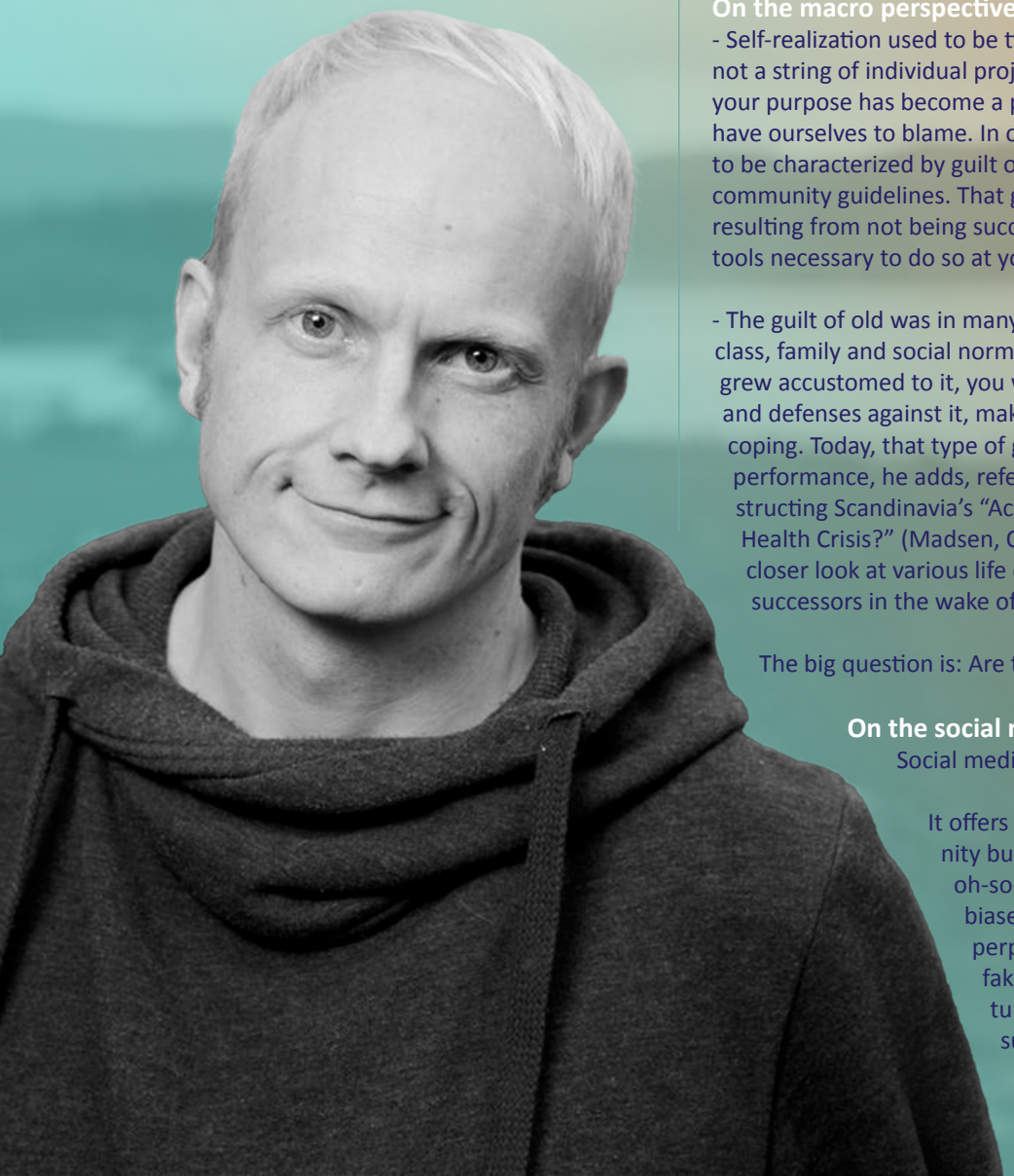
- Steve Jobs

Scrolling for Serenity

The interactive tools and toys of the new digital age have provided modern humans portals to easily accessible, therapeutic spaces. They fuel our fires, extinguish anguish, enable us to connect and offer us some much-needed communal spirit.

They also wreak havoc on our perception of values, morality and emotional stability.

Professor of Psychology Ole Jacob Madsen calls it a Technological Emocracy. He might be right.



We live in an era of unprecedented interconnectivity, where everything becomes the past faster than ever before, the current never stays in focus for long and the future is shaped by a steady onslaught of blink-and-we-might-miss-them impressions. We're caught in a technological maelstrom, and for some reason seem to be enjoying every moment.

Most likely, the maelstrom won't drown us - this is a watershed period in the society-building evolution of humankind. But the adults among us see it from a different perspective than the young. We were eased into the water, partly by choice and partly by forceful habit. The up-and-coming generation were born into it.

As a result, it can be argued that the mental health of the younger generation teeters on a delicate balance. They are interconnected like no generation before them, but the world they know no alternative to might pose great challenges to their psychological well-being.

Ole Jacob Madsen - psychologist, philosopher and professor at the University of Oslo – argues that globalization and the constant stream of manipulative impressions adds another level of performance pressure on today's youth.

Or do we simply need to redefine the process of self-realization in a digital age, and what doing that successfully actually means?

On the macro perspective

- Self-realization used to be tied to community and moral virtues, not a string of individual projects. We're at a point where finding your purpose has become a personal quest, and if we fail, we only have ourselves to blame. In other words: A failure to self-realize used to be characterized by guilt of not living up to inherent standards and community guidelines. That guilt has now been replaced by shame, resulting from not being successful when you, in theory, has all the tools necessary to do so at your disposal, says Madsen.

- The guilt of old was in many ways easier to accept, as your social class, family and social norms set precedents for position. As you grew accustomed to it, you were able to build your own barriers and defenses against it, making it easier to self-realize as you were coping. Today, that type of guilt has largely been replaced by performance, he adds, referencing his book on the topic; "Deconstructing Scandinavia's "Achievement Generation: A Youth Mental Health Crisis?" (Madsen, O.J., 2020). In his book, Madsen takes a closer look at various life challenges facing Gen-Z and their successors in the wake of this paradigm shift.

The big question is: Are the kids alright?

On the social media factor

Social media is a double-edged sword.

It offers platforms for expression and community building, but the very same platforms can oh-so-easily turn into breeding grounds for biased comparison, cyberbullying and the perpetuation of unrealistic life standards, fake or not. Social media has gradually turned into a perpetual driver for the suspension of disbelief.

- This has been a concern for quite some time now, both in the Nordics and elsewhere, due to an increase in reports on mental health issues. Whether social media is to blame is still an ongoing debate. You'll find studies that support that notion, but it is my impression that some adults seem to be overly worried about the impact. One of the challenges we face is that we tend to discuss screen time as an isolated thing, but I think we need to look at technology in relation to everyday lives, our networks and upbringing conditions, Madsen remarks, pointing to a celebrated book by famed author and psychologist Dr. Jean Marie Twenge, appropriately titled "iGen: Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy and Completely Unprepared for Adulthood" (Twenge, J.M., 2017).

> "We live in a **techno-logical emocracy**, where small things are blown out of proportion and the bigger issues shrink in comparison."
>
> - Ole J. Madsen

- Twenge connects the dots between mental health issues, suicide rates among young girls in the early 2010s and social media influence, concluding that we now experience higher levels of anxiety, depression and loneliness than seen in prior generations. We do however not see the same deterioration neither here *(Norway, ed.)* nor in other major global hubs, at least in terms of the most extreme outcomes, like suicide. That implies that technology alone is not a deciding factor, but lifestyles and cultures matter greatly too, in addition to the presence of a welfare state, socio economic factors and so on, Madsen says, adding:

- But it **does** affect our lives, greatly so, and it will and does affect kids. They have already figured out brand new ways to embrace technology, in different ways than we did growing up. Studies show that most young people still say that they live good lives. They are still optimists for the future. But they stay at home more. They accumulate more screen time and spend less time "hanging out". As a result, they depend on their parents for longer, postponing the journey towards adulthood and independence.

- You could argue that gaming and gamification fosters unity and cooperation, whereas social media sets the scene for comparison and outside influencers, Madsen says.

On the perceived and possible challenges

Mental and physical issues in society has been linked to the prevalence of technology in our lives, especially among young people. Is openness about mental health the answer? Madsen has thoughts:

- It's not always wise to classify and diagnose everything. We must be pragmatic, and only use those diagnoses if they can help us help people. The idea that openness and transparency is the answer to everything is too simplified for me. It's more complicated. When we talk about openness as a cure for mental health issues, we're usually talking about lighter mental health issues, or things we can control to some degree. My fear is that it is going to be a requirement to talk about it; be articulate and tell a story. That's not always compatible with actual mental health issues, he says, referring to the airing of personal challenges on public channels. His main worry right now is the looming of loneliness.

- I'm worried about loneliness becoming a public health issue. There's a chance it'll keep growing, and it's not necessarily directly related to screen time - you can have a lot of virtual friends. It's more related to hanging out with peers without adult supervision. Social training and physical contact is paramount to be able to take on the world, and a powerful antidote to loneliness. It also builds integration and coping skills, Madsen says.

- I believe that the significance of those aspects is too often overlooked. The critical importance and value of them are vastly underemphasized, he concludes.

Ole Jacob Madsen is a Professor of Cultural and Community Psychology at the Department of Psychology, University of Oslo.

He is an active participant and voice in the public debate on mental health in the face of new technologies, and the author of the book "Deconstructing Scandinavia's "Achievement Generation: A Youth Mental Health Crisis?" (Palgrave Macmillan, 2021), "Life Skills and Adolescent Mental Health: Can Kids Be Taught to Master Life?" (Routledge, 2023) and numerous articles on the complex issues related to mental health.

The **social** aspect

The social aspect

Connecting Through Screens:

Exploring the Impact of Digitalization on Social Interaction

As humans we are inherently social beings, a trait historically essential to ensure physical safety and securing survival.

The concept of a social group has undergone significant transformations since the days of our caveman ancestors, who relied on unity against threats from dangers and joint contributions. Not helping out or getting hurt might make others either ignore you or offer help, depending on the dynamics of individual interactions.

While we no longer rely on a herd for immediate survival as our ancestors did, we still exhibit the same mentality. In the digital age, smartphones and keyboards have replaced sticks and fire as socialization enablers.

The dynamics of belonging, recognition, and having a voice within our community have evolved, yet the fundamental need for these aspects is still there - in both our personal and professional life. The development of culture, the establishment of appropriate norms for group acceptance, and the essence of individual recognition, despite group behavior, largely emerge through the process of socialization (Eisenberg et al., 1998; Judge et al., 2001; Ariani et al., 2017).

The workplace and socialization face challenges when we can work from everywhere and anytime. No more chit-chats over morning coffee or gossip during lunch. That cozy feeling of being together in the office is over. The tacit knowledge present in a physical workplace is diminished – the chats, looks, laughter and body language.

The workplace is a crucial place to connect and disconnect. We get a break from home life, from dishes and grumpy kids. Some of us even feel that going to work is less work than running a household. We bond with colleagues, learn how to interact, and figure out how to talk to each other.

But what do we do when this space slowly fades away, and we only meet on “mandatory office-Wednesdays”? How do we stay connected while communicating through keystrokes and virtual meetings? How do we make everyone feel included, appreciated, and heard if we’re miles apart or just a click away?

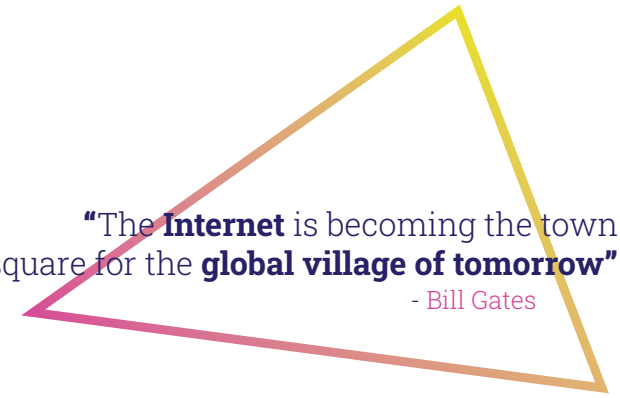
Do new workers need to log off and on, or will they find balance at home - where they throw a load of laundry in instead of having coffee with a colleague, surf the web during breaks and work when the kids are at soccer practice?

4.1 Socialization across the lifespan: From childhood to adulthood

What is socialization? Socialization is an ongoing and lifelong process, adapting to changes in individuals and society. It plays a vital role in maintaining social order and cohesion.

“Socialization is a complex process through which individuals learn and internalize the values, norms, behaviors, and cultural aspects of their society. It involves the acquisition of social skills, knowledge, and a sense of identity, enabling individuals to become functioning members of their community” (Schneider, Gruman & Coutts, 2012 p.2).

The socialization process typically occurs through various agents like family, peers and media.



4.1.1 Family life: Shaping identity and values

Family is often considered the primary agent of socialization, where we first learn basic norms and values. Parental guidance shapes early behaviors and beliefs, influencing our understanding of social roles and relationships (Hossain & Nandi, 2010).

Digitalization seems to significantly transform family dynamics. The integration of digital technologies into daily life has reshaped communication, relationships, and overall family functions. As parents we used to spend much time creating a safe environment for our children, making sure they didn't run into the street, ate too many cookies out the jar or learned not to accept candy from strangers. We mostly had control over where the children were and what they were doing.

Today, more children spend time at the virtual playground, not navigating dangerous roads but surfing on streaming sites and social media, without sufficient parental involvement. After all, they are at home in a safe environment, right? Where you previously had to trust that your child was where it claimed to be, today, with the help of a smartwatch, smartphones and Snapchat, it's now possible to see your child's location at any time and help family members stay connected regardless of physical distance (Valkenburg & Peter, 2007).

The internet offers endless entertainment and developmental opportunities. In the past, when adults wanted some peace from their children, they patiently waited for children's TV. Today, the iPad has become the new respite and the access to entertainment has no boundaries, providing the opportunity for hours of escape from children and a chance to check our own phone to see what's happening beyond our own living room.

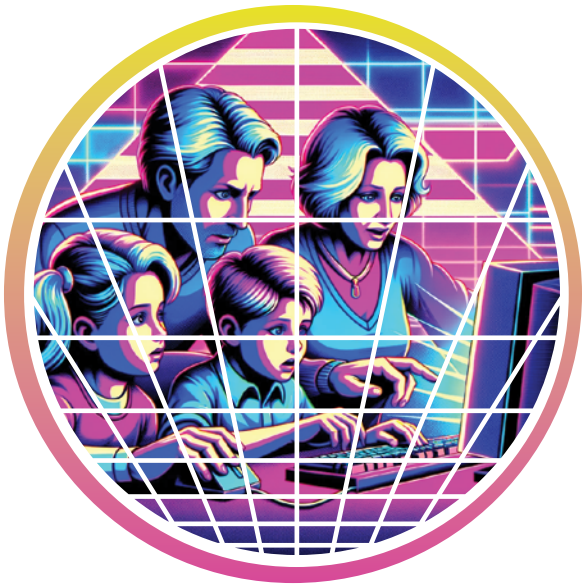
Does the use and availability have consequences for what actually happens in the home – that is, relationships within the family and partnership? Are we becoming more connected to our phones than each other?

4.1.2 Attachment and Presence

Attachment refers to the emotional bond individuals form with caregivers or significant others, influencing emotional and social development. According to John Bowlby attachment is a lasting psychological connectedness between human beings (Bowlby, 1969).

Presence, in psychological terms, pertains to being fully engaged, attentive and focused in the current moment. It's important to understand how being connected and focused in the moment affects our social and emotional health and is crucial for comprehending social and emotional well-being (The Great Norwegian Encyclopedia).

Strong social ties and a secure attachment style are associated with better mental and physical health. Presence, whether in our personal relationships or



MONKEY SEE, MONKEY DO: How parents use and interact with digital devices acts as a blueprint for their offspring. "Digital upbringing" is a real thing in the 21st century.

daily activities, contributes to reduced stress and improving our overall well-being (Bowlby, 1969).

Parental use of digital devices, if not managed effectively, can contribute to feelings of neglect among children and disrupt the parent-child bond and attachment (Radesky et al., 2014). If we as parents are more focused on being on our own mobile phones than on teaching our children to be "smart users of digital devices" - let's call it a kind of digital upbringing, could this lead to them having difficulty regulating their own usage?

The answer is most likely a yes as the apple doesn't fall far from the tree and we are all familiar with the phrase "do as I say, not as I do". When the day comes that your teenager can't eat dinner without looking down at his phone, your opinion is moot.

It's not just about teaching our children a good way to navigate and demonstrate moderation in a digital endless shopping mall, but also about teaching how we develop attachment, self-esteem and self-worth. If your mother doesn't look up from the computer when you cry because you've lost your teddy bear, or only half-listens when you tell her about something exciting that happened at school, this can affect how you feel about being with her - and whether she values her time with her phone or computer more than being with you.

If this becomes the normal way of socializing, it will affect you for a long time and may impact your ability to interact and be with others in real life later - including friends, partners and colleagues.

Attachment and presence in families has always been extremely important for how we develop, serving as the primary arena for socialization.

Now there are more distractions than ever before, and they are easily accessible. We can use them at home, at the playground, during gymnastics shows, and even on taco Friday evenings.

4.2 Screen time and social distance: Bridging the gap in youth relationships

Peers play a crucial role in socialization, particularly during adolescence. Peer groups provide opportunities for individuals to develop interpersonal skills, share common interests and develop their own identity apart from their family (Brown & Larson, 2009). But what about the generations to come?

How will growing up in the digital era affect how they interact with each other, and what will this mean for the future workforce?

Social media platforms play a crucial role in fostering virtual attachments and we can connect, share, and maintain relationships online, impacting the traditional notions of physical presence (Boyd & Ellison, 2007). Adolescents and emerging adults are some of the most prolific users of social media.

Natives vs. immigrants

The digital age has brought on a shift from a generation of digital immigrants to a generation of digital natives. What's the difference?

Digital natives:
Digital natives are characterized by their familiarity and comfort with digital technologies such as computers, smartphones, tablets, and the interconnected world provided by the internet in general.

They are considered to have an intuitive understanding of technology, having been exposed to it throughout their formative years. This exposure is believed to influence their learning styles, communication preferences, and overall app-roach to information (Prensky, 2001).

It is a core characteristic of Gen Z.

Digital immigrant:
These are people who had to adapt to life to technology, being raised prior to the digital age. They are predominantly of Gen X or older and did not grow up with ubiquitous computer- or internet access, but "learned by doing". Digital immigrants are considered to be born before 1985; they remember when everything was more or less analog (and often fondly reminisce about those times), but have always been technologically optimistic and eager to learn and adapt.

The digital immigrant concept is not without controversy, as it implies that there is a definitive gap between two generations and does not take into account people born prior to 1985 who may have had a role in developing these technologies or who seamlessly adapted to the digital age.

Given that their use is interwoven with their offline relationships, it begs the question: Does social media use impact offline interpersonal outcomes that support healthy interpersonal development? (London et al., 2022; Smith & Anderson, 2018).

The way we experience presence and attachment has undergone significant transformations. Technologies such as virtual reality and video conferencing have redefined the concept. We can feel a strong sense of being 'present' in virtual spaces, influencing both personal and professional interactions (Biocca, 1997).

Offline interpersonal outcomes result from how well we interact with each other in person and are able to effectively communicate and understand social or group dynamics (Bochner & Kelly, 1974). The quality of interpersonal competencies directly impacts our well-being (Erozkan, 2013).

Poor interpersonal competence in young people has been linked to e.g depression and social anxiety (La Greca & Harrison, 2005), fewer friends and lower family togetherness (Field, 2010).

Yet, given the interwoven nature of social media use and young people's relationships, it is often unclear whether interpersonal gains or losses stem from pure online contexts, offline or across both contexts (Nelson et al., 2016).

Previous research has recognized that given the unique features of social media environments, these platforms create distinct social contexts where interactions and relationships undergo transformation (Nesi et al., 2018). This idea lends to support the argument that if the interpersonal impact of social media on young people is to be truly understood, then we need to separate its effects online and offline

(Nelson et al., 2016). Negative experiences in real-life relationships because of online communication can affect how satisfying these relationships are (Konrath, 2013).

Spending a lot of time on social media might mean missing out on chances to practice real-life social skills (Konrath, 2013). Konrath explains that given the breadth and depth of signals (e.g., visual, auditory, tactile and chemical) available to us "in real life ", the time we spend using social media to interact may be at the expense of opportunities to practice interpersonal skills- to foster close friendships and relationships, it's important to utilize all our senses, not just our eyesight (Konrath, 2013).

The "Internet induced social skills hypothesis" recognizes the additional opportunities for social skill practice that online environments can provide users (Koutamanis et al., 2013).

Two additional hypotheses have been proposed to explain the relationship between certain individual user level factors and the impact of Internet use on interpersonal outcomes such as communication skills.

The "rich get richer hypothesis" suggests that those of us who are sociable individuals offline gain more social benefits from online communication, while the "social compensation hypothesis" predicts that those uncomfortable with face-to-face communication will be more able to benefit from increased communication opportunities online (Kraut et al., 2002).

Previously, adolescence was a time for exploring the world, especially in the pursuit of a great love, a first kiss, the first drunk experience, and being at home with your parents was unthinkable or a sign of lacking social opportunities.

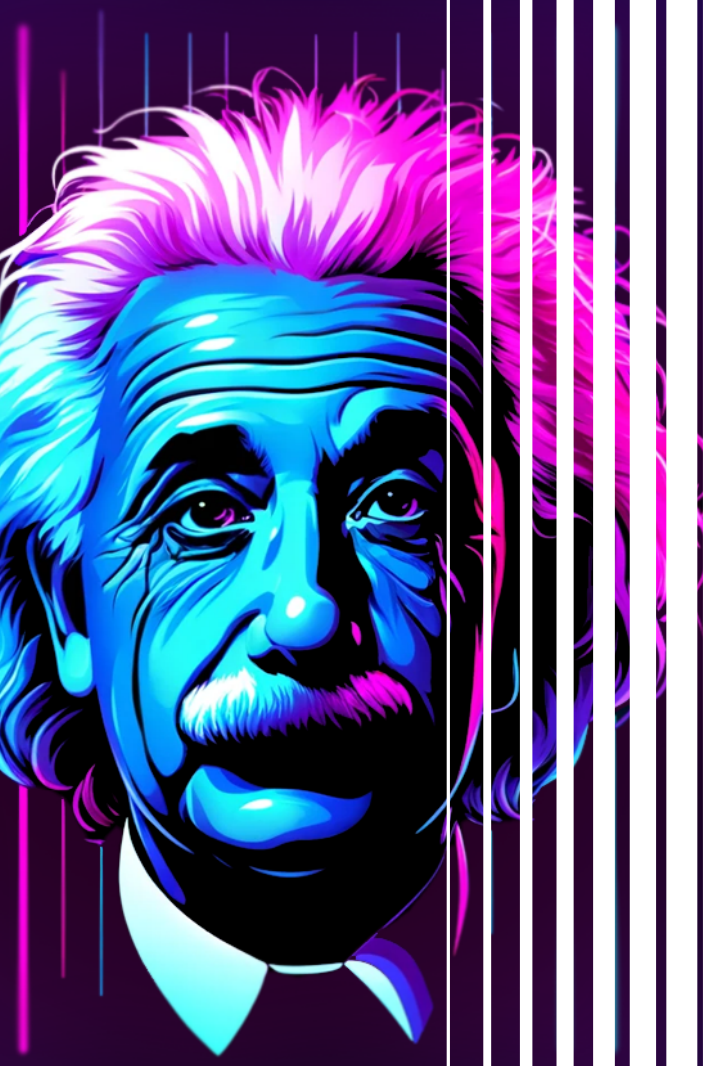
Putnam (1995) proposed the time displacement hypothesis, which states that "media use may distract from social activities and interpersonal interaction opportunities in which social and communication skills need to be practiced. Such time displacement has been linked to adverse impacts on social development in young people" (Hall, 2018, p 4).

Now, young people spend their time in front of screens. They use online maps to explore the world, tube channels to learn crafts, online reviews to make up their minds, swipes to date, chatbots and forums for mental venting, streaming to learn how to cook and apps to order the food afterwards. It's no longer a symptom of illness to be at home without physically being with others - it's an integral part of youth.

However, one still needs to experience the world physically to have their first kiss or have the opportunity for reproduction - something dating apps can help you with, seek potential partners, sex if you want it, with more or less strings attached. Do we need to redefine intimacy?

Where the young once searched for alcohol in the liquor cabinet, diluting dad's gin, they can now order amphetamines, fentanyl, GHB and other highly potent drugs to be delivered to their doorstep with the click of a button.

Humans being humans, the explorative substance curiosity remains the same, but accessibility and simplicity allow more individuals to explore earlier and more extensively than what was previously considered normal.



"I fear the day that technology will surpass our human interaction.

The world will have a generation of idiots."

- Albert Einstein

When it comes to bullying, exclusion, and gossiping, these are phenomena that have always existed throughout human history and are not new. The difference lies in the tools now available for such behaviors. Previously, one might have been bullied on the way to school or excluded from play. Right now, platforms like Snapchat and Instagram are the prime channels used for widespread bullying.

Not being included in a group chat, receiving mean picture comments, fake accounts created to deceive others; It seems that digital media and the fact that most people are on these platforms has made it more common to both say and receive hurtful remarks and to become cyberbullied (Brady & Crockett, 2019).

It's also more difficult to detect such bullying when some social media platforms effectively erase messages and traces of bullying just mere seconds after they are received, leaving no proof and adding uncertainty.

4.3 Look me in the eye

Digital communication tools have in many instances eliminated the need for traditional face-to-face interactions. The ubiquity of smartphones and constant connectivity can pose challenges to face-to-face presence and you may find it challenging to disengage from digital devices, affecting in-person interactions (Turkle, 2015).

The more introverted and/or strongly independent among us welcome that with open arms.

4.3.1 Face-to-Face Presence

While screen time can provide opportunities for shared activities, excessive use may also interfere with the quality of face-to-face interactions (McDaniel, 2019). Researchers have found that technology-based relations are ultimately less rich than face-to-face interactions (Kraut et al., 2002). Digital communication tends to eliminate nuances, leading to misunderstandings and communication delay- at work and in private life.

An analysis by Lee et al. from 2011 found that using the Internet for interpersonal communication had a negative impact on people's quality of life whereas talking to a friend or family member face-to-face for just 10 minutes had a positive impact on quality of life (Lee et al., 2011).

Do we need face-to-face connectivity - besides facial recognition on your phone? It is a subject of ongoing debate, with varying perspectives on its significance. Some argue that direct interpersonal connection is a fundamental aspect of human interaction, allowing for more nuanced communication through facial expressions (Hall, 2018).

Face-to-face interactions are believed to foster a deeper understanding between individuals, enabling a comprehensive grasp of emotions, intentions and contextual nuances (Tardanico, 2012). This form of communication is crucial for establishing trust (Lapidot-Lefler & Barak, 2012). Birdwhistell (1970) suggests that approximately 65% of the social significance of a situation originates from nonverbal signals.

Even with video calls, these nonverbal cues can be hard to see, making it tricky to understand what someone is feeling. When you can't accurately tell how someone is reacting or feeling, it's easy for misunderstandings and communication problems to happen - potentially leading to relationship breakdowns and conflicts (Plumridge, 2022).

Rotondi, Stanca and Tomasuolos research point out that just simply having a smartphone present when engaging in a face-to-face conversation can have negative effects on the quality of that interaction (Rotondi, Stanca & Tomasuolo, 2017).

With endless entertainment options readily available in our pockets, it's tempting to get distracted and casually check our screens, scrolling through social media while trying to engage in real-life conversations. If you behave like this it suggests boredom and a lack of interest in your communication partners, potentially resulting in weaker connections and more superficial conversations (Rotondi, Stanca & Tomasuolo 2017).

Physical presence may contribute to more authentic and meaningful connections, especially in professional relationships (Dietz-Uhler et al., 2015). Advancements in technology aim to bridge the gap between virtual and face-to-face interactions. Teams and other video conferencing applications attempt to imitate a sense of personal presence and enhance the quality of remote connectivity (Gajendran & Harrison, 2007).

Some of us may prioritize face-to-face interactions for specific scenarios, while others find virtual connectivity sufficient based on the context, convenience, and nature of the relationship (Parks & Layous, 2016).

A balanced approach involves leveraging both face-to-face and virtual connectivity depending on what you need and the situation. There are more and more hybrid models mixing different ways of communicating in work and social settings (Singh, Steele & Singh, 2021) - and it's wanted by most.

4.4 Help! We are going on vacation

When we visit other families, public places, and recreational activities, there is an expectation of good wifi coverage. The tablet becomes a break, the vacation, and our children must be dragged out for a ski trip or an all-inclusive resort when reaching a certain age.

"Screen time" is an undesirable concept that is often the subject of heated negotiation. In many families, we sit next to each other, pressing our own

gadgets instead of playing together, talking to each other, or updating each other on what's happening in our lives – that is more often done through social media channels.

The word "vacation" comes from the Latin word "feriae." (The Great Norwegian Encyclopedia). This was, and still is, used to describe a day when no trade is conducted. In other words, a day when you do something other than what you usually do. For most children, holidays are more about doing what they usually prefer but with more time, free from their "must do's" - like attending school.

What defines a vacation for an average working man or woman? It could be a period of relaxation, rest and disconnection from the professional sphere, since our daily lives increasingly revolve around being online.

We send emails, receive emails, fill our social media-filled tiny screens with thumbs, hearts, smileys and acronyms, give affirmation, receive affirmation, have access to others, and are available to them.

Vacation is supposed to be an opportunity to recharge, reduce stress, and focus on personal well-being. Vacation also allows time to spend with family and friends, explore new places, or engage in leisure activities and interests that may be deprioritized during a busy work routine.

"The **advance of technology** is based on making it fit in so that you don't really even notice it, so it's **part of everyday life.**"

- Bill Gates

Regardless of chosen activities, the main goal is often to achieve a balance between work and personal life, allowing us to return to work emotionally refreshed and more motivated. However, it seems that adults are not limited or subject to screen time during the holidays.

Many of struggle to log off; in fact, we often have more time to log on and get more work done while on vacation. What happens when the familiar and everyday constantly catch up with you on your escape? Do children need the experience of present parents, and not just seeing the back of a phone while as they're catching up on the latest fad?

It's not always easy to get away from it all. Catching a train is easy. Flights are cheap. Roads are endless. The problem is that we find it mentally hard to leave everyday life behind. According to an article by Tracy Bower in Forbes in July 2022, nearly 70% of us work while on vacation (Bower, 2022) and bring our computer in our bags. The email you know your boss expects you to reply to is clearly red-flagged in your inbox. So, you respond to it, your boss replies and you're back in the loop.

Friends and colleagues, and their updates on everything from celebrations, new recipes and changes in social status, follow you wherever. The psychological gain of experience and feeling something different from our daily lives might be the main reason why we escape for a short while.

So, whether you're traveling to Trysil, Tuscany or Taiwan, it's the movement itself and the change of scenery it offers that provide a kind of purification. Is this anything new or is the need to log off, and hence the offering of e.g offline vacations just the modern version of the classic desire to escape everyday life for a short while?

Do we need time to be completely at "peace" and disconnected to our daily lives ?

4.5 The art of moderation

We see clear challenges with socializing behind a screen. It can encroach on time spent with others, it can be directly misleading (like dating app profile pictures), digital communication can become more superficial, it changes the way we express ourselves both verbally and, OMG the way we write - LOL.

Many are sounding alarms. Some describe it as a screen epidemic. But a screen is not just a screen. Online meetings cannot be stopped - what we need are safe spaces. It's one thing to watch online videos on substance abuse, how to do maths or whip up a good birthday cake.

But how should we deal with it?

Some grow up in homes where there are clear digital rules, while others have a more laid-back approach. Some take online safety courses and understand the consequences of posting a picture on a dating profile. But many parents don't realize how important it is to teach our kids about this digital world.

How can we teach our children to navigate something we barely understand ourselves? We're digital immigrants in this world. It's almost like the student has to become the teacher. It seems like the young "natives" have to teach us adults how this digital landscape works, since it's a natural part of their upbringing.

Human levels of self-control differs greatly. Some of us can drink in moderation. Some remain slim in a culture of obesity. Some resist 3-for-2 offers on items we didn't really need in the first place. But most of us don't.

Are we able to set boundaries for ourselves and our children, or is the boundless digital universe too easily accessible to even consider switching off? If we can't peel ourselves away from screens and social feeds, should society step in and play referee, setting some ground rules?

Tech Talks & Time Bombs

The kids never miss a beat. Yet despite their tech savviness, their shoulder-shrugging off-course-this-exists approach to innovation and infuriatingly low bar for mastering anything interconnected, they are seemingly woefully unprepared for the challenges they might face in the near future.

The imbalance of ambition, knowledge and flawed wisdom is the classic curse of youth. In the digital age, perhaps even more so.

Dr. Jens Hetland, Psychology Specialist at Stavanger University Hospital, says the onslaught of digital technology should be considered as more than tools.

They can change the very fabric of humanity.

The digital age is a whirlwind of opportunities, challenges, unpredictability, crossed fingers, pathfinding and exploration, and the zoomers are in the eye of the storm. Social media has completely transformed how humans connect, interact and socialize on a global scale. Information access has never been more available, yet it still comes distilled through the powers that be. Transparency has never been more debated, yet remains a barrier, and despite knowing more than any other generation before them, Generation Z has trouble navigating even the simplest community norms.

These are confusing times, and the most challenging question of them all is whether the technology developments themselves can contribute to resolve, and subsequently whether it might turn our society away from traditional human-centric perspectives. Which sounds frightening, but is it really?

Clinical social psychologist Dr. Jens Hetland sees both sides.

On the shifting grounds

- Younger individuals have incorporated digital platforms into their socialization processes more than anyone else. From middle school and up we see a steady increase in the use of digital media, and Norwegian youth now use social media for more than three hours a day on average, and seven hours average online. A US survey shows adults spending a whopping 12 hours daily in front of screens. People dedicate more and more of their daily lives to screens, which leaves less time for face-to-face interaction, says Hetland.

- This is contradictive to fundamental human needs for connection, mutual interpersonal relationships and figuring out where and how we fit in society and the world in general. Digital technology is altering how we navigate the social space, and online interpersonal relationships are common. It is interesting to see, however, how research indicates that these connections can be as meaningful, intimate, and stable as conventional ones. Not to mention the expanded online universe, which includes social media, discussion forums and video games, which offer social arenas for individuals who, for various reasons, may have challenges in traditional settings, such as people with physical disabilities, he adds.

Hetland is also remarking how AI-driven conversational agents, or advanced chatbots, are increasingly becoming a part of people's daily lives. An increasing number of services now offer chatbots or apps programmed to provide human-like companionship, and forming emotional (and even romantic) bonds has gradually become accepted and normalized. In other words:

Whereas human needs for connection remains, the nature of how and when is changing.

> The upcoming generation demonstrates **a more conscious balance** between work, leisure and the maintenance of physical and mental health
>
> - Jens Hetland

- Digital technology, social media and artificial intelligence should not be solely understood as tools, but transformative forces with the potential to redefine the very fabric of human relationships, ultimately challenging the conventional human-centric perspective, Dr. Hetland says.

On the new flexibility

At the advent of the digital age, fueled by decades of romanticized science fiction utopias, we used to casually joke about a future where subservient, semi-sentient robots would take care of all manual labor, finally allowing humanity to focus on science, philosophy and ethereal musings.

As that future grows ever closer, it turns out the joke was on us. AI, automation, robot processes and synthetic consciousness won't help us stack boxes and dig trenches anytime soon. Instead, they are gradually conquering softer skills - creating art, producing stories, doing math and taking cracks at universal unknowns. It's not boding well for the coming generation, who might become underdogs in a game they helped shape.

- We are in a situation where large segments of the population may soon be outcompeted by artificial intelligence and robots, rendering them "useless" in terms of production. This could ultimately disproportionally sign significant power over to technology owners and potentially create significant class disparities, says Jens Hetland.

- At the same time, due to an aging population, we may face labor shortages, especially in healthcare and social sectors. In the short term, digital competition could create leeway by allowing workforce allocation to these segments, which appear more "technology-proof". Digital and biotechnology developments could also create new labor opportunities. When and how that will happen is difficult to predict, however.

- It is reasonable to assume that future workers may need to retrain throughout their careers to stay ahead of the technological curve and labor market changes, especially if technological development also leads to increased longevity. The ability to adapt and be flexible may become far more important for future generations, he reflects.

On the matter of perspective

Hetland says the emerging generation of digital natives, Gen Z, might just have the inherent flexibility needed to adapt to these changes:

- They know social digital interaction requires flexibility and always being available, but expect the same from others. Their flexibility and digital competence also means that they may challenge the traditional notion of what constitutes a workday, instead preferring individualized solutions with flexible hours and locations. Where previous generations may have felt a pressure to always be "on", the upcoming generation demonstrates a more conscious balance between work, leisure and maintenance of physical and mental health.

- The blurring could easily become a preferred work model that allows the upcoming generation to balance and prioritize their work/life balance. The utilization of digital technology will play a central role in this adaptation, says Hetland, adding:

- A core point is how the concept of "logging off" is understood by the emerging generation compared to the generations before them. If being "logged in" and available is seen as a natural part of social interaction or represents flexibility provided by the employer, the issue may cease to exist, as being "logged in" is both normative and desirable, he concludes.

__Dr. Jens Hetland__ is a clinical social psychologist affiliated with Stavanger University Hospital.

His research, publications and specialities cover a range of societal issues, from clinical studies on cognitive disabilities tied to polysubstance abuse, to depression and anxiety.

Photo by __Annette Øvrelid__

The **regulation** aspect

The regulation aspect

At the corner of trust and law:

Regulating modern life

As technology continues to permeate every aspect of our lives, the line between work and personal time has become increasingly indistinct. The challenge we face is not merely to manage these technologies, but to regulate them in a way that preserves our work/life balance.

Implementing measures that ensure technology serves as a tool for improvement rather than a force that governs our lives becomes ever more paramount for our time, bodies, psyche, intellect and ability to evolve society in a sustainable way.

Laws and regulations, however, are finicky. On one hand they are mostly devised to balance and improve the parts of society, human interactions, business operations and what we as a society have deemed appropriate. On the other hand they can restrict our freedoms, hamper innovation, prevent the not-so-scientific-but-very-effective human learning method of trying and failing, and even encourage more harmful ways to circumvent them.

As we rapidly approach the mid 2020s, the digital age has progressed far enough that we now see the outlines of long-term exposure to the innovations and mechanisms it has offered us thus far, and it's not all coming up roses.

There are roses, absolutely, like increased scientific awareness, the ability to produce more with less, communicate more with more, tear us away from generations-old work habits and expose ourselves to a brand-new world of impressions.

But the downsides arguably have more direct impact on society, and that has not gone under the radar of regulatory bodies. From the mid 2010s and onwards there has been a significant increase in regulatory and legislative initiatives aimed at holding tech companies accountable for both the services they offer and the societal effects of their use.

New rules and standards, covering data protection laws (e.g. GDPR) to antitrust investigations, content moderation, platform accountability, interface guidelines, accessibility requirements, applicability and more, have all come on the agenda for most modern societies.

This regulatory pressure has compelled tech companies to reassess their practices and policies to align with evolving legal requirements. There is also a growing emphasis on ethical considerations within the tech industry, with many companies adopting ethical frameworks to guide their product development and business practices.

These principles often emphasize transparency, fairness and the responsible use of technology, serving as a compass for ethical decision-making throughout the products and services development cycle.

But is it enough? As it stands, the public is increasingly looking back to see if companies are looking back to see if they are looking back at them.

No body of government is able to reverse technological advancement; instead, they aim to establish boundaries that protect personal time and well-being in this digital world. It is not simply about creating policies, but fostering a cultural shift towards a healthier integration of technology.

It is interesting to take a closer look at how Norway has approached the subject of regulation, and compare it to the realizations and processes of the rest of Europe and the world. Given the continuous advancements in technology and increased public adoption, regulation will be a never-ending story.

5.1 From farms to factories: With great industries come worries

In terms of technology regulations, the what, or outcome, is usually implied; enforced work/life balance among the general population, improved overall mental health, fewer cases of burnout, fewer injury cases and increased overall sustainability.

What's more interesting is the why; why do we need to enforce regulation in the first place, and how do we best go about doing it?

While the fourth industrial revolution is the cause of these pressing concerns, it began with the first. The onslaught of heavy machinery, the efficiency demands associated with assembly line production and the need to keep workers on the clock marked a stark contrast to the days of old, where most people were engaged in agricultural or craft-based work, often conducted within or near their homes (Thompson, 1967).

With these changes in work-, living- and engagement patterns came a brand new shift in the balance between work and life as a significant portion of the workforce moved from decentralized, home-based work to centralized factories and mills (Brochmann, 1991).

The Norwegian labor movement formally started with the establishment of the Norwegian Confederation of Trade Unions (LO) in 1899 (Bergh and Hjellum, 1981); a central organization to represent the interests of workers and coordinate collective bargaining efforts (Brochmann, 1991).

Alongside the trade union movement, political parties representing the interests of the working class also emerged. The Labour Party (1887) went on to play a crucial role in advocating for workers' rights (Bergh and Hjellum, 1981)

Industrialization normalized the concept of wage labor. Instead of being self-employed or working on family farms, individuals increasingly became wage earners (Bergh & Hjellum, 1981). This shift had implications for how people perceived their time, as they were now selling their labor for a fixed wage.

We have all seen the faded pictures of children slaving away in dimly lit factories. It might be common to think that rural hardships, a lack of wisdom and/or experience, the necessities for survival and social class divide made it easier for previous generations of workers to accept their fate, bow to ruling figures and ignore the fact that industrialization went in the face of inherent human traits and needs, but that is not the case.

The challenges and hardships associated with industrial work quickly spurred the formation of labor movements (Fløgstad, 1999), which addressed as the need for work/life balance, decent working conditions and the need for periodic breaks from

time to time. Preferably at a beach somewhere. As the industrial revolutions kept coming, basic human needs stayed the same. As we stagger our way through the fourth iteration, diversion of work and leisure is arguably more pressing than ever.

This transformative contemporary period accentuates the diminishing lines separating work and leisure, where the demarcation between the two has become progressively hazy, and the rise, availability and temptation of remote work has brought yet another piece to the puzzle: How can we effectively make work/life distinctions when they are technically one and the same, yet again.

Clark presents a term, "border theory," which points out that people in work are daily border crossers as they move physically from home to work (Clark, 2005). This makes an interesting point of view when one has remote work - do they still cross borders?

5.2 Top down, bottom up or sideways?

Who bears the responsibility for setting boundaries - if they are needed? Should we aim for changes at the global or national level, or should we focus on the individual, the employee, or each particular workplace?

Top-down interventions refers to a development approach where decisions and actions are initiated and controlled by higher-level authorities or organizations. It involves a top-down flow of resources, policies, and interventions from the central level to the local level. (Eveleigh, 2019). This approach often involves direct and centralized facilitation activities.

In a top-down approach the government might enforce strict rules about maximum working hours and these regulations are decided at a national level and apply uniformly across the country. On the other hand, bottom-up interventions emphasize community control and participation in decision-making and resource allocation (Eveleigh, 2019). It involves a grassroots approach where the persons directly involved take the lead in identifying their needs, setting priorities, and implementing solutions.

R&R IN THE T&Cs?: Norwegian labor movements fought tooth and nail for regulated vacation time, and it paid off - we're now paid to be off. It's a significant part of our work/life balance.

For instance, a group of employees might negotiate with their employer for flexible working hours or the option to work from home occasionally, based on their specific needs and circumstances, allowing for more tailored solutions that better reflect the diversity within different workplaces.

5.3 It sort of becomes a habit: The lack of local guidelines

It is often said that the road to Hell is paved with good intentions. Without strict regulations, companies, executives and their employees are mostly left to their own devices (sic) and best practices when it comes to setting guidelines for availability and technology use.

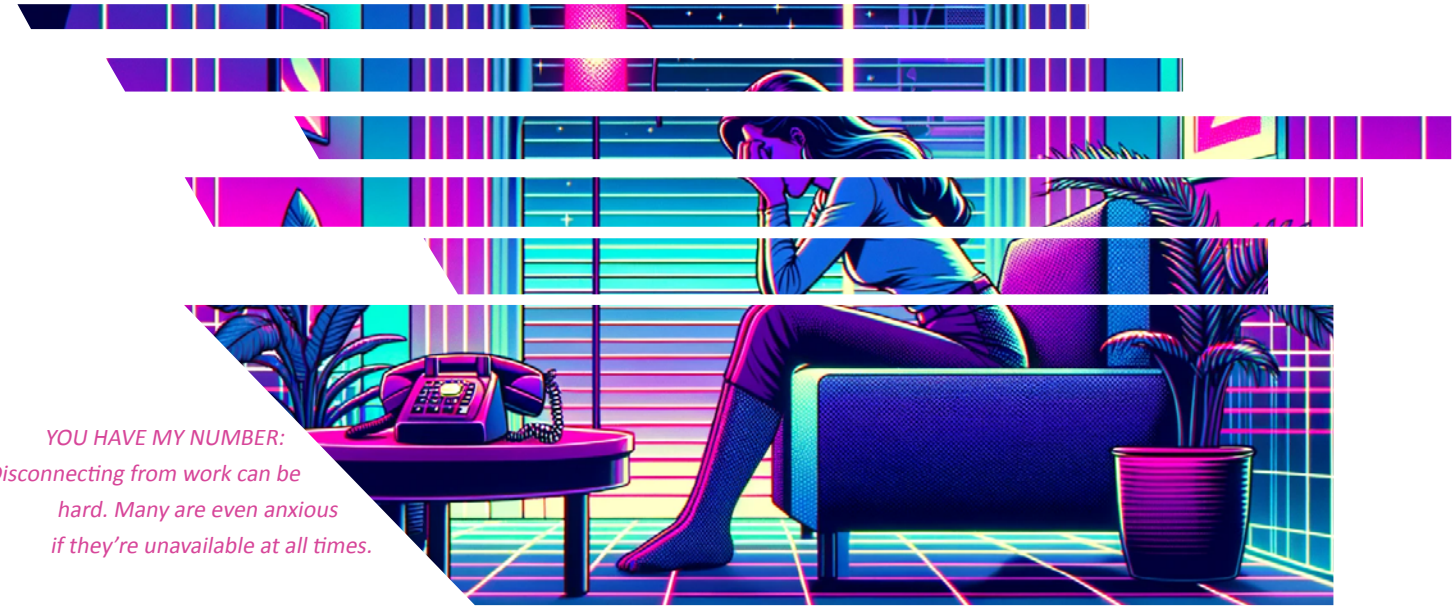
Many employers have. Approximately every other workplace reports to have guidelines for what is expected in terms of availability, but it's not always benign to workers. In a study conducted by Markussen et al., 44% of executives say they expect their colleagues to answer the phone and emails outside normal working hours (Markussen et al., 2022).

Of the 53% who stated that they do not expect it, executives in the age group 35–44 years who expect it the least (Markussen et al., 2022); a tell-tale sign of the digital immigrant generation, who recall a time when out of office meant "not available". It is also worth noting that if a manager contacts an employee outside working hours, he/she effectively legitimizes vice versa; opening the possibility that employees can do the same. According to a survey, 93% of executives experienced just that (Fokk, 2022).

A leadership survey among 510 executives, conducted by Respons Analyze, indicated that many have problems managing the accessibility provided by the new electronic tools (Aksnes et al., 2022), making proper policies not only hard to establish, but adhere.

A 2022 NITO survey showed that 53% responded that employees are not compensated with pay or time off if they respond to inquiries outside normal working hours (Aksnes et al., 2022), indicating that availability is simply "expected", and a number of employees had no guidelines from the company and their leaders on how to even set their preferred work/life boundaries.

The executives and leaders, for their part, did not want to interfere with how each employee organizes their working hours at the home office; as long as the employees worked well and delivered what they were supposed to (Aksnes et al., 2022), and felt that setting guidelines for employees' working hours could come off as undue



YOU HAVE MY NUMBER: Disconnecting from work can be hard. Many are even anxious if they're unavailable at all times.

micromanagement. It is a classic example of "not rocking the boat", while at the same time both undercutting the effect of leading by example and strengthening the need for adults in the room.

How can regulation adherence be ensured, and what consequences should violations entail?

The question of whether to make overstepping work/life boundaries a purely criminal offense is an easy route, but is severely complicated by the technology aspects themselves; they are, after all, designed to normalize availability, and the shifting trends of remote work, where employees increasingly prefer the option to juggle their own working hours.

In general there doesn't seem to be much controversy if there is an agreement in place deviating from regulations as long as it is accepted by both employers and employees.

It does however become contentious when certain tipping points are reached, such as health issues directly related to overwork, when overtime and availability are not compensated, accidents/injuries occur outside regular working hours, during labor disputes or other non-ideal circumstances.

The power dynamics are inherently uneven, and this also shifts some responsibility over to the technology developers themselves.

5.4 Atmospheric pressure: The bending of free will

Where do expectations of availability come from? A research report by Torvatn et al. indicates that 45% experience availability demands from management, 48% from customers and a even 44% from colleagues (Torvatn et al., 2023).

The biggest pressure often comes from within, however: A desire to be useful, relevant and perform to satisfaction is your primary driver (Torvatn et al., 2023).

It's not just about being available, though; it's also the feeling that you have to be at the ready and respond ASAP. Waiting around makes you antsy, so you jump on things as soon as they arise, just to combat that uneasy feeling.

In 2020, Belkin, Becker and Conroy completed their final version of the research article "The Invisible Leash: The impact of Organizational Expectations for Email Monitoring After-hours Employee

The elements of connectivity

The hyperconnected world runs on accessibility, and there are currently three main contributors to the disputed disturbance of work/life balance: E-mail, mobile phones and social media.

But to what extent?

Email

Research shows that **email correspondence outside of work** is prevalent for all occupations, regardless of education levels, but that the frequencies differ depending on the occupation and education (Vrålstad, 2014).

Numerous surveys address this subject. As far back as 2013, Statistics Norway found that 25% of workers, across all levels, read and sent emai outside of working hours, and that leaders and the highly educated did so the most (Vrålstad, 2014). Just three years later, a 2016 SINTEF survey found that the number had risen to 71%, and 56% felt expected to do so (Torvatn et al., 2023 in Frifagbevelgsen).

Phones

Mobile phones have more or less become an extension of our physical being, and with an increasing number of jobs either demanding the use of phones to ensure productivity or relying to individual accessibility, they have become a major obstacle to maintaining what could be argued to be a healthy work/life balance.

A 2022 study found that 40% of emails are now being opened on mobile devices, and a staggering 45% of Americans say that their phone is their "most prized possesion" and check it on average 344(!) times per day (Clario, 2022).

Those numbers examplify how intertwined our lives have become with mobile devices, and by association, how hard it is to keep work flows and leisure activities separate.

SoMe

Social media has become integral parts of our lives, and this convergence of work/life extends beyond mere job-related activities, delving into the privacy realm at work.

SoMe use is so prevalent now that the use is bound to bleed into work hours, further contributing to blurred work/life boundaries. It can be used to discuss work matters, which positively affects productivity (Jong et. Al, 2021), and the ability to stay connected with friends and family using those same channels can also mitigate negative work/life effects otherwise brought on by increased technology use and accessibility (Sharma and Sudesh, 2018).

Which raises the question: Is checking personal email and social media on the clock the modern equivalent of coffee breaks, and should it be regulated?

Resources, Well-Being and Turnover Intention" (Belkin et al., 2020). They found that one reason you might feel pressured to be available outside of work hours is because of expectations set by your organization.

When your workplace has strong norms about bringing work home off the clock, it can really affect your behavior and how you feel about it. Feeling like you're obligated to work after hours can come from a fear of damaging or losing important connections at work, especially if everyone else is doing it. Plus, there's the potential for rewards or consequences depending on whether you follow the norm, like earning recognition or avoiding disciplinary action (Belkin et al., 2020).

Belkin's study uncovered two main outcomes of reading emails outside of work hours. One is emotional exhaustion, which throws off your work-life balance and can make you more likely to think about leaving your job. The other is a lack of detachment from work, which is crucial for maintaining that balance.

Interestingly, the actual time spent reading emails wasn't as important as the expectation itself in creating these negative effects. So, even if you only spend a little time checking emails after work, the pressure to always be "on" can still take a toll (Belkin et al., 2020).

The work of Derks, Van Duin, Tims, and Bakker, which deals with the relationship between the use of smartphones, work engagement, social morals and disturbance of work-leisure balance, shows something similar to Belkin et al.

The survey indicates that the feeling of being disturbed at home follows the fluctuations in smartphone use in the afternoon/evening. The more you're glued to your phone, the harder it is to switch off from work mode when you're supposed to be chilling at home. Interestingly, those of us who are really into our work during the day don't feel as pressured to be available compared to those with little engagement (Derks et al., 2015).

In Stich, Tarafdar and Cooper's research, reference is made to a survey where a whole 73% express anxiety about not being available for the workplace. They point out that for many, it can be a difficult choice to be disconnected from work; even when you're out of office. there's this nagging worry that if you're not reachable, something bad might happen or you might miss out on something important in your job (Stich, Tarafdar, Cooper & Stacey, 2018).

Other research discovered that many are actually quite happy and content with being constantly available (Yang et al., 2022). If you feel a strong connection to your work and control what you do, you enjoy your job and feel empowered.

When you feel respected, valued and appreciated at work you tend to be happier, more committed and genuinely interested in what you're doing; the sense of fulfillment and satisfaction that comes from knowing you're doing meaningful work and making a difference. For others, it's the opposite, resulting in what's commonly known as "quiet quitters".

What is Quiet Quitting?

In simple words, the term refers to employees who put no more effort into their jobs than absolutely necessary.

According to Harvard Business Review (2022), quiet quitters continue to fulfill their primary responsibilities, but they're less willing to engage in activities known as citizenship behaviors: no more staying late, showing up early, or attending non-mandatory meetings or working after hours". (Hetler, 2022)

5.5 Individual factors

Deciding whether to put in extra hours after work, blurring the lines between your professional and personal life, is like navigating a maze of psychological, organizational, and personal factors. People differ. Figuring out how all these pieces fit together is key, particularly when working hours and conditions are not determined by technology but influenced by other factors, with technology simply being a tool.

5.5.1 Psychological factors

Contemplating work outside of official hours isn't exactly a new trend. Historically, employees have carried over a work state of mind from to home, battling constant mental chatter, stress, and struggling to unwind when they know that unfinished tasks are left hanging (Deci, Vallerand, Pelletier & Ryan, 1991). Others can easily switch off.

The key factor contributing to this discrepancy is often job engagement. When we are deeply invested in work and perform well, stress tends to align with the workload (Deci, Vallerand, Pelletier & Ryan,1991). Successfully accomplishing tasks imparts a sense of achievement, enabling you to be fully present at a party with your friends, partaking in lively conversation without thinking about emails and deadlines like tomorrow never comes.

The ability to work remotely is perceived as a potential stress reducer, contingent on the manageability of the workload. Therefore, the central concern may not solely be constant availability but rather the daily workload you contend with.

If you're buried under a pile of tasks, working from home won't make a difference.

Regulating this aspect through legislation can be challenging, as it is inherently tied to an individual's work capacity. Crafting a one-size-fits-all law applicable to diverse workplaces is a formidable task.

5.5.1.1 Personality traits

Certain personality traits, like being super organized, driven and having a strong work ethic often mean you're more likely to put in extra hours at work. Studies show that folks high in conscientiousness - those who are disciplined, organized, and have goal-oriented behavior - are more prone to working late (Biron & Boon, 2013).

If you're the worrying kind, with high levels of neuroticism, marked by emotional instability and anxiety, you might find yourself working long hours too, motivated by a fear of failure or a need for perfection (Burke, Matthiesen & Pallesen, 2006). Moreover, you might feel stressed just because your inbox isn't overflowing with new emails - and speculation about potential reasons why.

Then there's extroversion, which is all about being social, outgoing and full of energy. Extrovert people might be more willing to stay late because they thrive on the social side of work and love hanging out with coworkers (Grant & Sonnentag, 2010). And if you're the type who's always looking for ways to improve and grow, you might see overtime as a gateway to personal and professional development (Barrick, Mount & Gupta, 2003).

Lastly, if you feel you have a good handle on your work/life balance and the ability to manage conflicting demands, you might be more open to putting in extra time at work when required (Greenhaus & Beutell, 1985).

5.5.2 Social factors

There are many social factors that can reflect the individual's relationship with work, colleagues and a broader societal context. Individuals with fewer family- or personal obligations may be more inclined to work beyond regular hours.

On the other hand, those with significant familial responsibilities may prioritize work-life balance, affecting their willingness to partake in overtime (Michel et al., 2011).

If you're a lone wolf with no dinner waiting, you're more likely to work late than if you're a single dad with soccer practice pickup obligations and a need to have dinner ready by six. Research suggests that gender roles and societal expectations can influence the labor divisions within families, impacting the likelihood of employees, particularly women, working after hours (Rapoport et al.,2002).

The financial situation you're in will also have an impact. If you've just taken out a loan to buy a car you couldn't really afford, you're more likely to put in overtime than if you're debt-free - if you get paid for the overtime, that is.

5.5.3 Intersocial factors

When you're deciding whether to put in extra hours at work, your cultural background might be a contributing factor. In some cultures, there's a vibe of hardcore work ethic and dedication that might make you feel like staying late voluntarily (Hofstede, 1980).

If you really love your job and your employers you might even feel morally or emotionally bound to go above and beyond the call of duty (Meyer & Allen, 1991). There might also be external factors, like society's expectations of workaholism or parental pushes for your professional career, which can both push a burning of midnight oil (Byron, 2005).

The workplace culture can impact whether you continue the grind after hours or not (Rapoport et al., 2002). If your company culture is all about teamwork and coworkers are your closest friends, you might find yourself more willing to stick around after hours, fuelled by a collective feeling of responsibility (Buelens & Van den Broeck, 2007). Cool perk offerings like remote work options could sway your decision too, offsetting the work-life balance struggle a little (Rapoport et al., 2002).

With the freedom to place your working hours at your own preference comes increased responsibility for limiting your own working hours. At the same time, this responsibility cannot solely lie with the employees, or can it? What about the employer? Are they just crossing their fingers and hoping that recruitment processes are precise enough to pinpoint the right personality traits and status markers, and then hire folks willing to go above and beyond office walls?

Employers would be over the moon if that was the case. At least for a while - until the "nice girl" starts teetering and tumbling into sick leave with anxiety and a neck as stiff as a board.

5.6 A sign of the times: The "Right to Disconnect"

Can we legislate the "right to disconnect" from work? Several European countries have introduced "right to disconnect from work" legislation by

"The right to disconnect"?

The concept and discussion of "the right to disconnect" is a hub element of most of the content in this thesis, and a clear definition is both timely and right.

"The right to disconnect" refers to **an employees´ right to be able to disconnect from work** and refrain from engaging in work-related communication, such as emails, video conferencing etc. during non-work hours and holidays.

The topic is becoming prioritized as digital devices used for work and leisure become increasingly intertwined, the software used for work often overlap with private use and connectivity becomes less and less of an obstacle.

From a regulatory perspective, the right to disconnect has risen high on the agenda all over the world, and laws, guidelines and regulations have already been instituted in countries like Germany, France, South Korea and Norway.

Some say that the premise for such regulations are wrong; that individuals should be given the tools to regulate work/life balance from their end, as the blurred lines between the two are now becoming norm. One proponent of such reverse approach is long-time digital transformation prophet Torgeir Waterhouse; check out our interview on page 87.

(Leroux, (2017), Olterman, (2021) & Gyeonggi Province, (2020)

2023. Is this the way to go? We have already regulated working hours in Norway by law. Still, many people work at times they in theory should be off the clock, stretching out evenings and impeding Sunday bliss.

The "Right to Disconnect" has been promoted as a strategy to protect workers from the uninterrupted and continued pressure to be available outside regular working hours, including through dispatch communication.

In several jurisdictions, including France, legislation has been implemented or discussed that gives workers the right to ignore work-related communication, especially emails, after working hours. Exemplified by the "Loi Travail" in France (2017), this legislation gives workers the right to refuse to respond to work-related communication when they are not at work (Leroux, 2017).

Germany has also expressed interest in introducing similar regulations to achieve a more balanced work-life (Secunda, 2019). South Korea has addressed this issue through the "Work-Life Balance Support Act," emphasizing protection of workers' right to dissociate outside working hours (Lockton Global Compliance, 2019).

These regulations mark a significant shift in work related regulation, acknowledging the boundless nature of modern work and its potential consequences for the well-being and privacy of workers. The ongoing discussion and implementation of "Right to Disconnect" legislation illustrate a global movement to protect workers from the potential negative effects of constant digital presence outside regular working hours.

An important aspect concerning national regulations from authorities is that the Norwegian people have shown loyalty to restrictions, e.g, during the pandemic. The majority adhered to infection control measures and refrained from traveling to their cabins.

This is thought to reflect the seriousness conveyed by the authorities regarding the actual health consequences an outbreak could have. There was a common understanding that this was a collective effort, and everyone had to sacrifice personal comforts for the greater good.

Could a similar scenario unfold if the consequences of never logging off and blurring the lines between work and leisure become extensive, leading to significant physical and mental health implications and altering the way people socialize? If everyone logs off after work, perhaps it can be regulated before it has significant ysocietal consequences.

This requires a shift in attitudes, trust in authorities, and an acknowledgment that it is acceptable to log off even with the opportunity to work around the clock.

5.7 The curious case of Norway

After decades of trying to carve out a living from fishing, shipbuilding and sporadic mining ventures, Norway struck the natural resource lottery in the 1960s.
The massive amounts of hydrocarbons we were able to extract from our seabed has enabled us to maintain a high standard of living for close to 60+ years and benefitted us with above-average levels of disposable income.

Excess money turned us into a nation of early adopters of technology, both individually and as a society, and high technology adoption rates enabled Norwegians to embrace remote work possibilities at an early stage.

Norway has a long-standing tradition of being a champion of workers´ rights, making sure that hours are kept, pay levels are somewhat fair and families are included in employer/employee relationships, and its approach to work/life challenges of the digital age was seamlessly integrated with existing laws.

Digi-vikings at a glance

Norway's tech adoption numbers are high compared to the rest of the world, and 2024 data showed:

5.44 million internet users in total, equalling a staggering **99%** penetration rate. The global average was 66% in 2024.

4.49 million social media users, meaning that close to **82%** were frequent SoMe users, some 20% more than the global average. Males accounted for 50.8% of the total SoMe interactions.

6.06 million Norwegian mobile cell phone connections, a 110% coverage, meaning that we all have cell phones, and **10% of us had 2 or more**.

That's 40% more that the global average of 69.4%.

43% of Norwegians owned a smart watch, **51%** owned an internet connected tablet and **17%** had a smart home device

Close to **6 hours per day** was spent using the internet across devices

32% reported worries about data privacy and data misuse

We spent more money on the darting app **Tinder** than other app, which is bad news for social interactions in the digital age.

(Datareportal, 2024)

As the 20th century progressed, average Norwegian working hours gradually declined, before it rose again in the mid 1980s as more women entered the workforce, consumerism intensified, living costs went up and supplementary jobs became more common (Benum, 2015).

Regulation initiatives related to technology use and work/life balance surfaced as early as 2006, stating that employers has a legal obligation to "secure a working environment that provides a basis for a healthy and meaningful working situation, affords full safety from harmful physical and mental influences and always has a standard of welfare consistent with the level of technological and social development of society" (Arbeidsmiljøloven, 2006, § 1–1). Those notions were further expanded upon a few years later.

Not being a direct member of the European Union, Norway nevertheless follows its regulation and policies on many, if not most, aspects of societal developments. Technology, despite being inherently boundary-less, is no exception.

This means that in addition to strict domestic regulations on working environments, we are also obligated to follow suit on the EU's Digital Decade policy program, which sets 2030 targets for a digital transformation, and the EU's Digital Single Market strategy, which will significantly affect technology influence on both individuals and corporations (Frosio, 2023).

5.7.1 New rules when the sun goes down

Norwegian unions have been active participants in discussions on how to best regulate digital accessibility laws and guidelines.

Some of these guidelines are already in place, with several more added following surveys and experiences in

Norwegian Working Environment Act

Introduced in 1977, the NWEA is "a set of regulations and guidelines that govern various aspects of the working environment, including working conditions, safety, health, and the rights and responsibilities of employers and employees. It covers working hours, rest periods, occupational health and safety, workplace conditions, and more to ensure a safe and healthy work environment for employees".

It is **a strict set of laws and regulations that all active workforce members must adhere to**, from top to bottom level. It is without equal anywhere in the world.

It is comprehensive, but among the main stipulations are strict rules for the limitations on working hours per day, week, month and year, red days and holidays. It limits regular working hours to nine hours over a 24-hour period and 40 hours over a seven day period.

For employees with demanding work schedules, such as shift work, rotating shifts, nighttime work and Sunday work, the limits on weekly working hours are shorter.

As the world grows ever more digital, it has undergone several revisions and additions in recent years (Arbeidstilsynet, 2024).

the wake of the Covid-19 pandemic, when remote work became the standard modus operandi for large swaths of workers. These changes came into effect in July 2022, and were especially focused on the well-being of employees working from home.

It's now a part of the Norwegian Working Environment Act, and exempts the need for a written agreement when remote work is mandated or recommended by authorities, easing the administrative burden on employers in times of rapid, mandatory changes, but they still need to provide information on the extent of remote work, hours and availability. All in step with union representatives, of course.

The regulations emphasize remote work psychosocial environments, like the ability to contact and communicate with colleagues; an important mental health factor in the digital age, as discussed in Chapter 3. It also prohibits remote work between 21.00 and 06.00 mon-sat unless a volunteer agreement has been brokered, effectively giving more power over availability to employees.

It's all overseen and enforced by the authorities, there are fines are aplenty should the rules be broken, and it's all in the name of work/life balance (Frifagbevegelse, 2022).

5.8 Watching the watchers: The EU's spearhead position

It could be argued that technology is one of the things bringing us together, both literally and metaphorically, but that does not imply that corporations should be given free rein to wield data, ignore effects of wrong use or insert themselves into unchecked positions of power.

The European Union (EU) has been paying close attention to possible harmful ripple effects of

BIG MOTHER: The European Union has taken a tough stance on tech giants' market dominance, the importance of data privacy and regulation of technology use in recent years.

digital transformation for years, and has positioned itself at the forefront of global technology regulation, setting benchmarks that resonate beyond its borders.

The EU has taken a leadership role on key technology legislative measures in recent years, and universal laws such as the General Data Protection Regulation (GDPR) set the bar for numerous laws and regulations across the globe in its wake.

The basic concept of citizens having the right to protection of their personal data sets a strong precedent (European Commission, 2016).

EU regulations are mandatory for all members, but even non-member states are given directives (Orrick, 2024), which further spread legislative impact. Broad initiatives like the "European Digital Decade" program (2021), aims to set measurable targets for connectivity, digital skills, digital business and digital public services.

The objective is to educate, secure digital infrastructures, enable digital business transformation and digitally transform public services within the European Union.

The actions have proven effective, and stringent antitrust actions against technology giants have emphasized its commitment to maintaining fair competition within the digital marketplace, with the added effect of actually and ironically enabling technology in general to become more readily available to larger segments of the population.

Technology is borderless, but several of the tech companies affected by EU laws are not EU based.

The bottom line is the guiding light, and as of Q1 2024, tech majors have been fined billions of dollars for breaching EU data rules (Deutsch, 2022), forcing behemoths like Meta, Google, Apple, Microsoft and more to change policies on data storage and targeting practices, diversify platform access and revamp their terms as part of a more holistic compliance approach (Orrick, 2024), effectively causing a global ripple effect.

EU TECH REGULATIONS
TIMELINE 2019-2024

The EU has enacted a number of tech regulations in recent years. Here are some **highlights**.

(European Council, 2024)

2019
EU **regulation on ethics and values** for AI, cybersecurity capacity, e-skills and inclusion of vulnerable groups

2020
EU adopts **Cybersecurity Act**, which introduces a system of EU-wide certification schemes and an EU cyber security agency

2020
European Cybersecurity Competence Centre is established

2020
First ever **sanctions against cyber attacks**. They included travel bans and asset freezes

2020
Digital justice: EU member states will increase use of digital tools in judicial proceedings

2020
EU officially prioritizes **cybersecurity for connected devices** – including a standard for Internet of Things

2020
EU adopts resolution on encryption to **protect digital security** of citizens, industry and society

2020
Digital Europe programme is launched. Budget: €7.588 million

2020
Updated ePrivacy rules: Citizens are given more control of their personal data. Bad news for Google.

2021
Roam-like-home extended, ensuring low-cost mobile phone use across borders.

2021
EU approves **Digital Markets Act** to regulate big tech and creating a level playing field for EU businesses

2021
Digital Services Act will stop counterfeit goods, cyber threats and disinformation - what is illegal offline is now illegal online

2022
European digital identity (eID) framework agreed

2022
EU adopts **2030 Digital Decade** programme

2023
First AI rules introduced to ensure safety and respect.

2023
Interoperable Europe act: A new framework to ensure public services across borders

2024
Expansion of **digital business tools**, allowing SMEs to complete procedures across the EU without re-submitting documents.

REGULATION

The measure of the justice of a system is the amount of protection it guarantees to the weakest

- Aung San Suu Kyi

5.9 Byte and switch: The conundrum of tech regulations

The question of regulating technology use, its accessibility and the effect it has on the delicate balance of work/life is twofold: Bottom-up and top-down. It requires one approach from an individual perspective, and an over-arching, more encompassing approach from a societal perspective.

Although those two perspectives come with different perspectives and challenges, they overlap on one central element: The inertia of humanity amidst a whirlwind of technological developments.

5.9.1 It's Sunday, people: The individual perspective

Having the right to disconnect from work sounds intriguing and tempting. It is also technically possible; all we have to do is switch off notifications, unplug the gadgets, purposefully drain batteries and disable the wi-fi, but reality bites.

The big question is: Do employees feel empowered enough to make those choices, and if so, do they even have the option to act on it?

Mobile phones are the primary obstacle, as they by definition encapsulate the duality of work and leisure; they have become our go-to tool for everything from personal entertainment to news, social interactions, practical tasks and yes, work.

By having them within arm's reach at any given time, we are effectively making ourselves available to managers, colleagues, clients and tasks. It's part tempting, part habitual, part expected and part natural. It's also a detrimental contributor to the gradual deterioration of perceived free will.
Many corporations, large and small, are well aware. Several have implemented company rules and guidelines, such as prohibiting the sending of emails after working hours, or ensuring that emails sent are not accessible to the recipient until the next working day, all in the name of work/life balance, sustainable business practices, personal well-being and reduced turnover rates. The effect of being contacted on your personal phone for work-related issues feels more intrusive into an employee's life than if the company provides a work phone.

Having technical regulatory measures can work well for many employers, especially in public sectors that do not provide emergency services on the clock, or private corporations relying on around-the-clock operations, where regulations could mean losing out on lucrative business.

Additionally, if you need to conduct business on a global scale, being able to send email outside working hours is crucial - it's a core reason for e-mail's existence, after all. It might also be argued that such arrangements might be more applicable for employees than for those in leadership positions.

We must question whether the use of email and working on a computer at home is the problem, or whether it is how we manage time while at work? If no one used social media, checked the news or snuck in a short mobile game session during work hours, but instead focused on actual work, would overtime and evening screen time still be necessary?

The answer is complex and highly individual, but it's paradoxical that we have digital tools so readily available and legitimized during the workday that we might feel compelled to use the same resources in the evening.

5.9.2 In the name of greater good: The societal perspective

Despite the universal consensus that we are all free-willed, independent and more or less capable individuals, the reality of the digital age is that we are all cogs in the same great machine. That machine is not perfect. If it was, regulation would be redundant. In an age where information overload is a tangible concern, data is arguably more valuable than people and money-making schemes are becoming increasingly intricate, there is an increasing need for societal supervision.

Norway has built on decades of work/life regulations to introduce technology-based work/life regulations, but even if it could arguably be in a position to lead by example, the country does not have adequate sway over the international regulatory policies to set standards.

Entities like the EU are in a much stronger position, and have set stringent guidelines for technological development, accessibility and corporations' ability to both harvest and use personal data in recent years. It's effectful, and will potentially set sustainable precedents as we enter the later stages of the digital age.

The strong public regulation being introduced in more and more countries and regions all over the world will undoubtedly both shift the targets and upend operations for a number of major technology corporations and their offerings, which in turn will trickle down to more individual control over how, when and for what we use tech-based tools.

Besides the actual rules of conduct, another core element of societal regulation is educating individuals, not only on the reach and functions of technology, but the dangers and opportunities it provides.

Humans are easily overwhelmed, habitual by nature and tend to be short-sighted unless being repeatedly presented with larger perspectives. Educating, informing and presenting achievable change patterns might help mitigate increasingly blurred work/life boundaries.

The connectivity conundrum

Optimism and realism do not have to be mutually exclusive. Sometimes they even coexist as two facets of the same reality.

That doesn't necessarily imply that you shouldn't ask hard questions; critical thinking is the key that unlocks the door to discernment, and hopefully a better outcome from inescapable developments.

Torgeir Waterhouse has been an advocate for a balanced eager and prudent approach to technology embracement for decades.

He believes a better tomorrow hinges on our ability to let go of the past.

Modern day societies are trying their best to navigate a shifting maze of social dynamics, eco-friendliness, tech powered efficiency, science-led resilience and just the right amount of government transparency. To do that, we need everyone on board - from politicians to pundits, businesses to activists and even the general public, divided and attention-fleeting as we are.

More often than not, we are botching it in a spectacular fashion. It's not that we aren't trying. It's just that we're clueless, clinging to outdated wisdom and basing decisions on inherited expertise that cannot be carried over to a technology-driven society that is without precedent in human history.

By and large, our collective faceplant comes from a stubborn refusal to admit we're winging it. The traditional way of regulating technology-driven social changes are, for lack of a better word, feeble. The only way we can forge a sturdy, sustainable and future-proof society is by embracing trial, error and the humbling journey of learning by doing. Which implies conditioning ourselves to jump head first.

Or so says Torgeir Waterhouse, perhaps one of Norway's most outspoken and prominent technology realists of the 21st century.

He champions a change philosophy centered on putting people first, recognizing the individual power tech hands to each of us.

On the Big Picture

- If I was to summarize the technological developments we have experienced in the most recent decades, it would be continuous development. It has allowed us to thrive in ways we've never seen before. There is a clear connection between access to technology and life standard improvements. Just consider a basic thing like communication - we can overcome geographical barriers now. Time barriers, physical barriers and more. Technology has given us the opportunity to take on, handle and process more - look at all the advancements in health industry sectors, for example. And we can use it to mitigate human exposure to risk, either completely or significantly reduce them. The list is very, very long, says Waterhouse.

As a technology optimist at heart, he is easily enthused by possibilities. What dampens the rosiness are his thoughts on how we, as humans, approach these seemingly limitless possibilities. And how we mismanage opportunities; one of his ongoing peeves with the society we live in:

- We too often see technology attacked based on preservation of existing social structures or institutions, which to me is counter-intuitive to reaching the goals we currently have as a society, where things are far more complex. Bookstores are a prime example of this, where we have gone to great lengths to preserve their statuses as social arenas and local anchor points. This hampers technology's ability to be a change agent, to drive literature forward and keep languages alive and thriving, he explains.

- Not separating between physical and digital media is an important first step towards technology adaptation and levelling the playing field. The overarching goal must be the distribution of knowledge and building of skills, not the format it comes in.

Photo: Otte.no

> A gap exists between **acquiring knowledge** and **understanding** its implications
>
> - Torgeir Waterhouse

On where the focus should be

Waterhouse's concerns over misguided approaches to technology regulation is at the core of his conviction: That society needs a radically different approach to governance in a digital age, and too much is hinging on old schools of thought, inherited wisdom and comparing new opportunities with past experiences.

- All the debates on social issues, economy, culture and legalities are based on a premise of development linearity. We need to switch from experience-based choices to making choices based on the experiences we seek. By doing that, we need to accept a higher failure rate and a higher degree of uncertainty.

Waterhouse highlights governments' clumsy efforts to standardize the time and presence of technology in work/life context as a prime example of flawed regulation, as everyone seems to focus on the wrong end of the pointy stick:

- We base too many choices on assumptions. It's important to recognize that we have a discrepancy between the old ways of doing things and the new ways of organizing our lives. When you talk about work/life balance, people tend to compare it with the traditional 9-5 workday, where the two things were very distinct, he emphasizes.

- Some parents of young children today find great value in flexible work schedules, allowing them to manage family duties by day and catch up on work by evening, achieving a full day's work. When it works, it's a blessing. When it doesn't, it becomes a form of tyranny - all work, no life.

- Regulation is necessary, but the extent is debatable. The real challenge lies in crafting effective regulations without enforcing counterproductive constraints. For instance, prohibiting employers from contacting employees after hours sounds good in theory but may not be practical in our dynamic world. Instead, we should focus on regulations and technology that manage the **timing** of communication. If regulations prevent me from emailing my team after 16.00, it could unfairly restrict **my** own working hours. Being able to work flexibly is crucial for my own work-life balance, allowing me to attend to personal needs and distribute my workload according to what suits me best, Waterhouse explains.

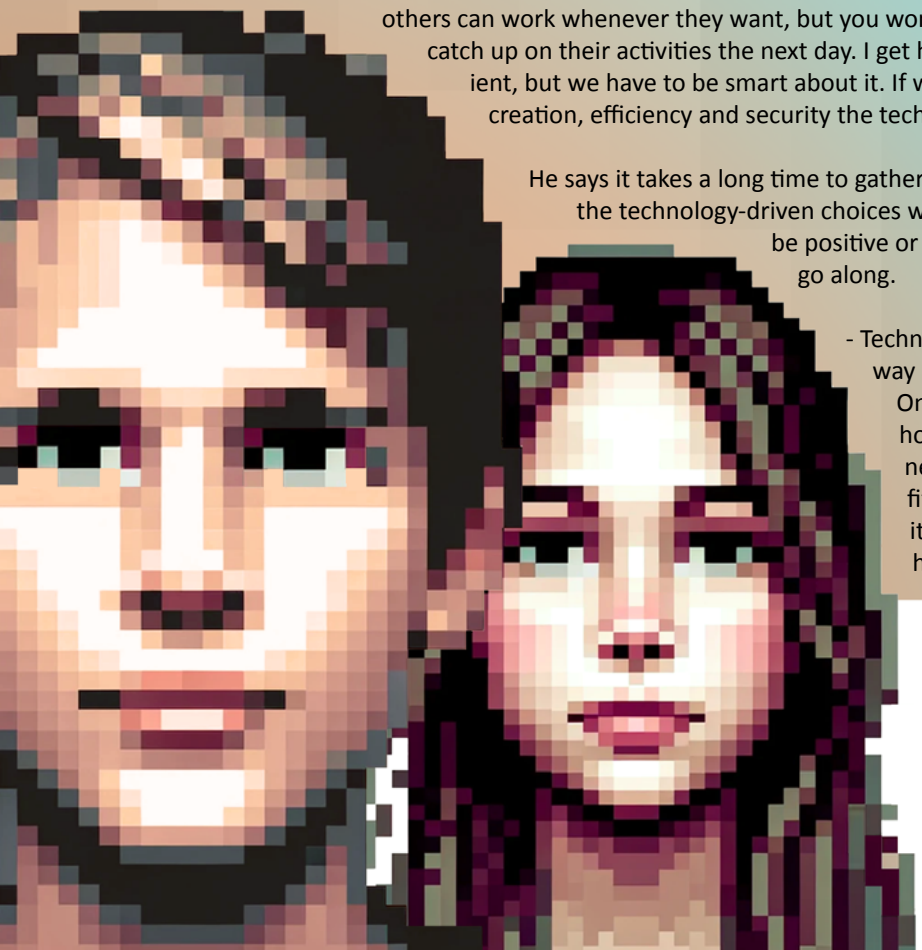
On the antidote

The art of knowledge-based regulation is delicate, and Torgeir Waterhouse has been a champion of a new approach to this for years. He says we need to focus more on the individual end users, not a one-size-fits-all set of laws:

- The antidote is imposing user-centric regulations, not putting restrictions on everyone else. That way others can work whenever they want, but you won't be affected by that if you do not want to. You'll catch up on their activities the next day. I get how regulations are made to shield you, the recipient, but we have to be smart about it. If we don't, we'll end up hurting the potential value creation, efficiency and security the technology offers, says Waterhouse.

He says it takes a long time to gather the experience and analyze the consequences of the technology-driven choices we make today. Whether those consequences will be positive or negative depends on the choices we make as we go along.

- Technology shapes us, but we can shape it too; it's a two-way street. There are two main factors to remember: Once technology arrives, things will never go back to how they were before, and the way we tend to utilize new technology tends to be headless. To truly benefit, we must adapt to its rules. It's not the technology itself, but how we use it, that determines our future, he concludes.



Torgeir Waterhouse is renowned for forward-thinking and outspoken perspectives on the intersection of technology, society and regulation. He's an expert on digital transformation and regularly contributes to journals, blogs and conferences. His visions continue to inspire, making him a pivotal figure in shaping the digital age.

The **balance**

All things considered

The art of balance

Work/life balance can be found at the exit of an unpassable maze constructed from practicalities, priorities, values, traditions, technologies, laws of nature, laws of physics and happy-go-lucky chances, all masked by the timeless illusion of free will. It's individualism wrapped in a societal context, and it affects us all differently.

Throughout this paper we have scratched the surface of the complexities that form the basis for a sustainable work/life balance. It's a puzzle for the ages.

6.0 The unbearable lightness of existence

Life is hard, and as humans, we are hardwired to contribute to make it easier on ourselves, our children, partners, family and the community at large. Having to set aside hours on end, day in and day out, to do paid work in order to manifest that is an exhausting necessity.

People spending excess energy on work leaves less time, room and resources to maintain and build a sustainable society, with the end result being counterproductive to the aforementioned inherent human goals. Hence the importance of a dynamic and adaptive work/life balance. Despite occasionally hampering productivity, long-term net positives of a proper work/life balance is universally accepted and recognized.

Yet here we are, in the middle- to late stages of the fourth iteration of the industrial revolution, being overwhelmed, overworked, always on, always alert and almost unable to disconnect from it all.

Our community as a whole does not benefit from exhausted working adults who cannot meet the demands and expectations placed upon us by nature and society.

At the same time, efforts must be made to enable as many people as possible to participate in the workforce in order to distribute the operational load and fulfill an incoherent vision of long-term sustainability.

This is where technology comes in. Technology is per definition science-backed tools, mechanisms, contraptions and applications designed to make life easier, increase productivity or achieve a desired objective; in theory to help humans achieve the overarching goals of a better life.

The digital age, with all the technological changes, opportunities and new horizons that came with it, has fundamentally altered the nature of work itself. It has given us the optional freedom we need to indeed make life easier.

It has enabled flexibility, work-from-anywhere options, inclusion of otherwise disadvantaged groups, lightning fast communication and the ability to solve complex tasks that seemed like moonshots just a generation ago. The real and potential societal benefits are extensive.

That's the silver lining, but the list of downsides is equally long. There's the risk of redundancy, the excessive dependence on intangible tools, the threats to privacy, the mental and physical toll on the human body, the engineering of politics and public opinion; the list goes on. In addition, as with

most technological evolutions and developments, some segments of the populace inevitably receive the short end of the stick.

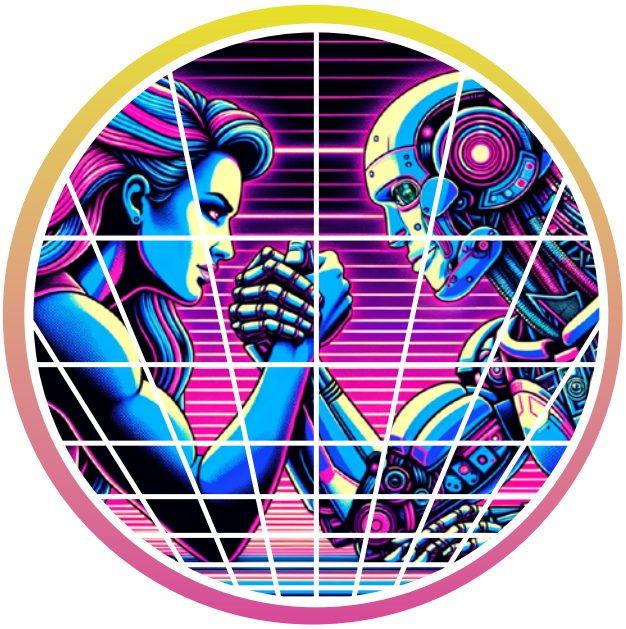
It's crucial to acknowledge the digital divide, where certain groups, such as the financially not-so-well-off, seniors with limited digital immigration options and individuals from disadvantaged backgrounds or with reduced cognitive functions have a hard time keeping up with the times. For them, work/life balance might be low on the list of priorities.

In order to understand what constitutes a sustainable work/life balance, we need to look at what it means for individuals, how society can find an equilibrium and how the circumstances of today will or could set a precedent for the future.

6.1 The strive for equilibrium

The concept of work/life balance is both straightforward and erratic. On paper it's about finding the sweet spot between professional duties and personal pleasures, ensuring neither side overwhelms the other, and subsequently enabling us to do more with our lives. Reality is hardly that clear-cut. What constitutes balance for one might be chaos for another. For some it means logging off at 17.00 on the dot. For others it's the ability to blend work and obligations with private errands at will, painting with a palette of personal preferences.

Pinning down a universal definition is hard, if not impossible. According to Guest, work/life balance can metaphorically be seen as a set of weighted scales, where balance is achieved when there is an equal distribution of weight or amount. This idea of balance does not say anything about the weight of each individual load - it could be severe, heavy or light, but as long as the counterweight equalizes the burdens on each side of the scale, balance is achieved (Guest, 2013).



A weight equilibrium, in this case between work and life, does not reveal the total mass of the weights and counterweights. It will differ from person to person. Some might be able to lift and balance massive loads, others close to nothing.

Those differences do not mean that either one has a more or less balanced life than the other. It just means that as individuals, we must find a balance within ourselves - an acknowledgment of how much we can handle before tipping over.

Humans do have a tendency to overestimate their own strengths, however, and overzealous lifts can easily wear and tear a person down. This is where employers and society in general need to step up and set boundaries, guidelines and accommodate adaptive scaling. Technology developments have arguably increased the need for proactive regulation to balance the scales as the general public gradually becomes ever more engulfed in a new digitally driven reality.

A central point of the regulation conundrum is the questions surrounding the right to disconnect. Or rather if we even still have a choice, seeing how tightly intertwined our lives have become with the very causes of the concern. It's a Stockholm Syndrome effect at this point, but it nevertheless

Life's a very funny proposition, after all
Imagination, jealousy, hypocrisy and all
Three meals a day
A whole lot to say;
When you haven't got the coin,
you're always in the way
Everybody's fighting
as we wend our way along
Every fellow claims
the other fellow's in the wrong;

Hurried and worried
Until we're buried
And there's no curtain call
Life's a very funny proposition after all

- **George M. Cohen**
from "Little Johnny Jones" (1904)

beckons the need for rules and guidelines, from both employers and governmental legislation.

Humans are strong-willed by nature, however, and the practical exercise of how, when, where and why we choose to disconnect will be our own prerogative.

6.1.1 The interpretations of a good life

Some of us live to work. Others work to live. It's an unpredictable and inescapable trait of human diversity, and as the workforces, workplaces and tools of our trades keep evolving into an increasingly complex landscape, it makes it gradually more difficult for any form of authority, private or public, to streamline rules and guidelines.

Having the flexibility to prioritize personal interests and juggle them alongside work is tempting, and one of the main drivers of the rise in remote work, but it can also lead to a tipping of the scales that's not necessarily to employers' benefit in cases where employees are unable to find optimal work/life balance on their own.

But that's preferential, too. Despite being tired after a night of binge-watching sitcoms, hung over from an impromptu party the day before, caught up in a social media hot streak or having a to do-list that's extra long because there was a sneaker flash sale downtown, the employee might be perfectly content with the freedom to choose those things over committing to office work.

That's their definition of work/life balance, and that's ok, for them.

For employers it's often different. They have quotas to meet, deadlines to catch, problems that are imminent and bottom lines that need to stay in the black. In a world that no longer requires the same amount of time spent at a supervised office desk, they need to engage employees in tasks that fosters commitment and motivation to gain the desired results, and to do that, they have to take into consideration more than the technological framework they now have the ability to operate in.

Enter millennials and Gen Z, who now make up the majority of the active workforce across most segments, regions and professions. The technological solutions and opportunities that surround us are nothing special to them; it's a part of their native modus operandi.

The flexible boundaries of work, the accessibility of information and the near-instant gratification of interconnectivity is the framework for their work/life balance, but not what defines it.

They define it through degrees of inclusivity and identity dogmas, freedom of choice, fairness of pay, democratization of authority and appreciation of softer, more intangible values (political and environmental).

These are all key elements for the good life model for the current and incoming generations.

Embracing these new value sets is crucial for a sustainable place of work in the later stages of the Digital Age, and balancing traditional business goals with the prerequisites of a changing workforce demographic is paramount to offering a more individually tailored and long-term work/life balance which will benefit all points of the trifecta; society, employers and employees.

Every generational trend comes with an antithesis. For the current generations, it's lack of experience – a natural extension of everything being new or revamped; large portions of the knowledge built up over centuries have become redundant in the last couple of decades, and the relatively easy life provided by technology has so far produced some worrying results.

Evident not just by the statistical facts showing general physical and mental health decline in the general populace, but the safety nets set up by society which opens up for arguably too much freedom, which has the potential to lower the participation levels society depends on. In other words: There is a potential that the freedom provided by the Digital Age might tip the work/life scales too much in favor of life, which can end up hurting the participation levels society depends on to function.

In a world filled with easy pleasures, how can you convince people to participate in challenges, even though it might make them feel useful and part of a community that enhances mental well-being over time? Today, more and more people are living at home with their parents for longer. They study more - often in academia, where the number of young disabled individuals is increasing, forcing some societies to recruit labor from less advantageous regions to fill societal roles that the young locals do not want.

This indicates an attitude problem, but it also requires top-down regulations. If it's equally financially rewarding to not work as it is to work, society needs to take action at a political level - regulatory measures that will apply to the entire population and create balance in society between people's willingness to work, participation in society beyond personal welfare.

The technology is not the deciding factor; the individual engagement level is.

6.1.2 Balancing on a circle of expectations

When discussing work/life balance, expectations will vary. So will experiences. Demands play a part, and they vary on an individual level, as well as between the people involved. A partner or boss might see it differently than the person in question (Guest, 2013).

As an employee, you might be perfectly comfortable with the demands you set for your ideal work/life balance and how you are able to navigate

REFLECTIONS

life and the choices you make. But your spouse might feel differently. So might your friends, your colleagues, employer or even certain people in public places of power. They might not think your choice to postpone the product development plan, network compatibility test or budget revision until the weekend is the right thing to do.

That might have a ripple effect, where imbalances in inter-human relationships can impede joint contribution to relationships, the community and society in general. What might be right for you, might not be right for some.

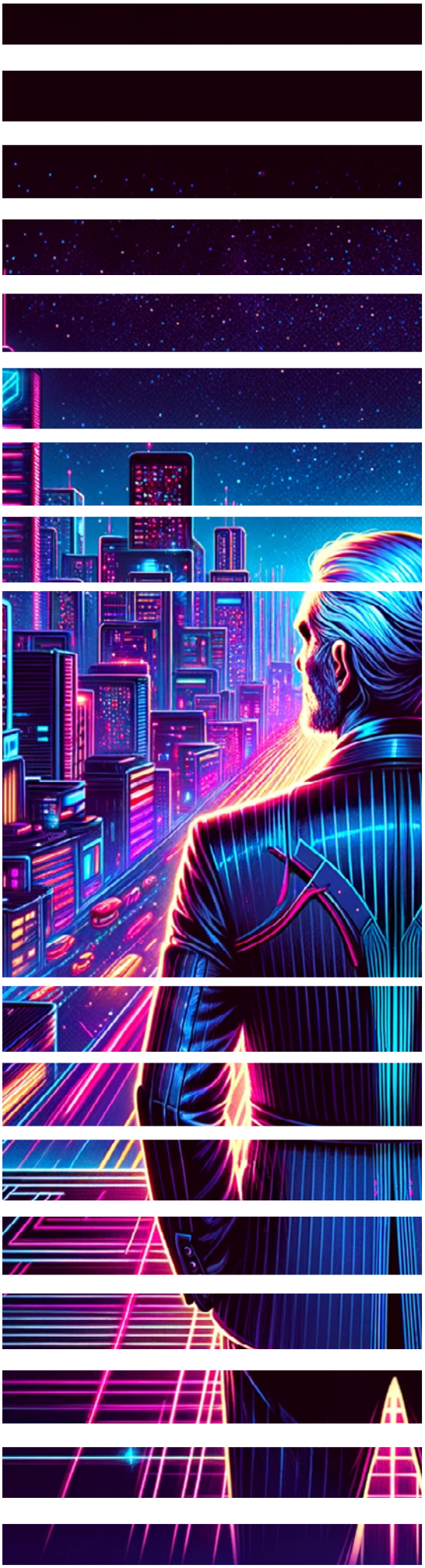
It is an issue of practicality, but it also introduces the philosophical questions of morality and ethics. Can we do it? Yes, we have the technology, and we increasingly have the ability and autonomy to design our preferred work/life balance, but no man is an island. When signs show that society slowly slips as a result of remote work preferences, exclusively engaging in online socializing and decreased inter-human contact, it's clearly not sustainable in the long run.

Or is it? Older generations have complained about the lack of morale and productivity, unsightly looks and trends and inability to plan for the future for millennia. Yet here we are, arguably better off than before.

Given their conscious approach to the very definition of work, the incoming generation might figure it out in ways still unknown. They might look back at the mid-2020s and wonder why work/life balance was even a subject of discussion.

The future is shaping now

It's a stretched thought, but looking at how the current generations are actively trying to reshape not only the core values of what constitutes a good life, but the why, how and what of business and politics, they might be on the right track.



NOTHING NEW: Older generations have shook their heads and fists at the hopelessness of youth for millennia. Yet here we are. It seems to always work out, somehow.

One example is the growing pressure on corporations to shift their soft value propositions, replacing traditional Corporate Social Responsibility policies to Corporate Digital Responsibility programs, where the realities of the Digital Age - its information flow and interconnected state - dictates both what we do, how we do it and why.

The gradual corporate shift towards a more conscious approach to both the use and repercussions of digital technology use is synchronous with the value sets of the incoming Gen Zers, and to some extent the already workforce-dominant millennials (Francis & Hoefnel, 2022). Combining CDR it with traditional CSR values effectively fuses business goals with political accountability and responsibility demands from an increasingly digitized workforce (Orbik & Zozuľaková, 2019).

The importance of ethics and CDR policies will most likely continue to grow exponentially in the years to come, and a failure to meet and adapt to those values head on might offset other initiatives, or even regulations, designed to ensure workforce sustainability.

That's just one more piece of the puzzle, though. Internal corporate HR policies and initiatives also constitute a significant part of employer/employee relationships, and subsequently the effectiveness and sustainability of work/life balance approaches.

6.1.3 To the beat of which drum: The importance of attitude

Working conditions and culture consist of two main, combined elements: Formalities and informalities. Digital technology, gadgets, solutions, connectivity and the plethora of digital enablers are just means to an end, but they do affect the two main components, and in the digital age exponentially so.

Work/life balance stems from a conditional and cultural base, and whereas disconnecting from work is now increasingly becoming a formality – it might not be the optimal choice for neither formal or informal reasons.

Oh, behave!

Albeit based on a growing consciousness around the effects of industrial expansion and the welfare of workers among die-hard capitalists of the 19th century, the term "**corporate social responsibility**" (CSR) was first coined in 1953 by American economist Howard Bowen in his publication Social Responsibilities of the Businessman (Bowen, Gond and Bowen, 2013),

It detailed how **fundamental morality should guide how businesses behave** toward society, clients and employees, offering comprehensive discussion of business ethics and social responsibility.

Even though Bowens et. al set a premise for what constitutes CSR, and despite significant research on the topic, there is no definitive consensus on all the details of what it entails, but CSR is in general and broadly defined as **"corporations should go beyond their minimum legal obligations and consider their impact on society when making strategic and operational decisions and taking actions"** (van der Merwe and Al Achkar, 2022, p 2).

In the 70+ years since Bowen's theories were first published, the rules of the game have changed a little. The playing field, however, has changed a lot.

Traditional CSR has been gradually balanced with **Corporate Digital Responsibility (CDR)**, where the key words cover things like conscious data collection and use, ethical development/deployment of digital tech and **how to operate responsibly in the digital age,** regardless of regulation (Lobschat et. al, 2021).

The ongoing discussion on work/life balance regulation usually fails to take into account whether opting for such regulatory rights, e.g. the option to log in and log out at your own discretion as long as the job gets one, is actually favorable for the individual employee.

How can employers nudge individual employees into chasing a work/life, or formal/informal, balance that's not only beneficial for each employee, but the company and, by extension, society as a whole?

This question adds the issue of sustainable, informal conditioning of employees to the mix, and whether leaders and executives have the, albeit informal, obligation to contribute to the right work/life balance for his or her subordinates.

It becomes a question of leading by example, based on a combination of managerial and leadership skills, generational preferences and zeitgeist, regulation and a wide range of global agendas.

Coming from an executive position at Google, a juggernaut of the digital age, Lars Bratsberg emphasizes how leadership attitudes must contribute to a harmonious relationship between humans and technology both on and off the clock, even if technology is a core element of the business. He says work/life regulation must be both leadership-driven and focus on employee attitude adjustments, exemplified by his no laptop-rule in meetings to maximize efficiency.

Why? At its core: Because humans are humans, and falling prey to distraction is an integral part of our DNA. At a practical level: Because as a leader, he felt both obligated to eliminate such distractions in the name of focus and productivity, and to condition his employees into realizing that they could be more efficient, more in the moment and better prepared to self-regulate their work (and subsequently, life) by putting their tools aside when needed.

> "The **quality of a leader** is reflected in the standards they set for themselves."
> - Ray Kroc

Being able to combine work goals with educating your employees and colleagues boils down to a matter of trust. It's a top-down regulation, funded on employees' belief that it's the right thing to do, which over time will manifest itself in habit and proven results. If done right, it will gradually shift from a top-down to a bottom-up approach and solution, gaining momentum and autonomy as it develops and spreads.

Good habits done right are easy to maintain, and might lead to an increased sense of individual self-realization, which in turn will influence employee choices of when to be on or off the clock, resulting in an individually tailored work/life balance of the scales.

Our flag means opportunity

Leadership influence on positive and lasting contributions to employee work/life balance issues is not restricted to hands-on practicalities of individual leaders, though. It needs to be anchored in corporate strategy, blending seamlessly with CSR/CDR policies. This is commonly referred to as "the way we do things around here", and corporations increasingly need to adapt their norms to a range of external and internal aspects. Technology might set the framework for some of the changes, but adapting to external and generational factors will be equally important to secure a trifecta of internal, personal and societal sustainability.

A key strategic element in this is the need for education. Regulatory bodies like the EU has identified this as a core element in their "European Digital Decade" program (European Commission, 2021), as use patterns and technology developments in recent years have shown that top-down regulation simply won't suffice when it comes to growth and sustainability in a irreversibly digitized society.

For corporations this means embracing the negative aspects of technologically driven changes on equal footing as the opportunities they offer and investing in not only digital literacy programs, but attitude- and habit-forming incentives to empower its employees to identify and effectuate positive changes to individual work/life balance factors.

In other words: Help them help themselves, to the effect that all associated parties; the company, the individuals and society, will benefit.

Attention to uniqueness

Another element in the mix is a shift in human resource policies, largely fuelled by shifts in generational traits and global trends that cannot be ignored. Millennials and Gen Zers value openness, transparency, flexibility and predictability (Deloitte, 2022), and accommodating those values alongside external targets (economic, societal, environmental and ethical) are key to securing employees that are capable of optimizing their own preferences in a wider context, and subsequently improved physical and mental states, increased productivity, reinforced company culture, lower turnover rates and positive impact on society at large.

Sounds great. But how?

Change leadership in the digital age must be focused on the overlap between individualism (a core trait of the current generations), technology, sustainability (internal and external) and regulations (both internal and external).

This daunting theoretical venn diagram can be broken into numerous individual aspects, but one element transcends all of them: Dialogue.

Optimal work/life balance is exceptionally personal, and the technological tools at our disposal are close to perfect for accommodating that fact, which means there is no need to discuss the particularities; they can easily be tailored.

The top-down regulations are more or less mandatory (and increasingly so) too, so approaching them comes down to explanation and adoption. What you are left to customize is individual support and guidance; the ultimate bottom-up approach.

We dare to argue that human resource strategy and proper change management is key to ensuring a sustainable work/life balance; a balanced set of scales that is as tailored as possible to each individual, backed by immovable top-down factors like public regulation.

Customizing digital literacy programs, developing employee activity schemes that allow for optimal flexibility, supporting that with attitude-changing internal strategies and making sure that all aspects of individualism can prevail is a mighty beast to tackle, but it's not only what the incoming generations expect; it's what needed to ensure a sustainable business in a world that is rapidly becoming centered on those very elements.

The sheer scope; the needs, prerequisites, implications, possibilities and challenges related to the latter is, in our opinion, enough to form a basis for a whole separate E-MBA course study.

6.1.4 Is adequate good enough?

Top-down and bottom-up approaches are equivalents for micro and macro perspectives. A cohesive society hinges on intertwines of the two.

It's not what makes the sun rise and set every day, but it is what keeps the world turning. Examining those two approaches is a perpetual cause for study, trial and error, change and adjustments. But at a certain point we have to ask ourselves: Is a middle ground – a "close enough" balancing of the scales – sufficient for sustainability, both individually and societally?

Technology developments will continue to shape our daily lives for as long as we insist on inhabiting this planet. The current generations didn't start the fire, and we will not be the ones to put it out (fingers crossed). We adapt. So if the general population, regardless of age, ethnicity, profession, country or any other characteristic survives and continues to thrive on an aggregated level, is an adequately balanced work/life situation satisfactory?

Adjusted for new technologies, if a population has good physical and mental health, the ability to flex work and leisure, sufficient digital literacy levels to navigate a changing technological landscape, manages to build and maintain social arenas and occasionally finds the time to get away and reboot their state of mind, then maybe that's good enough.

If you are able to meet the formal and informal prerequisites for a functional work/life equilibrium, you'll most likely do fine. At the same time, the eternal human quest for progress will continue to challenge any status quo, regardless of present sufficiency. There is always a void to fill, a challenge to ponder, another realm to explore and regrets to be undone.

This inherent desire to change and explore is perpetually accelerated by technology, and given the future predictions for technology developments, it's looking to be a challenging, but exciting, ride. It's also a symbiosis, where human aspirations is the main cause for technology developments and the technology developed will encourage humanity to keep pushing forward.

It is explicitly linked.

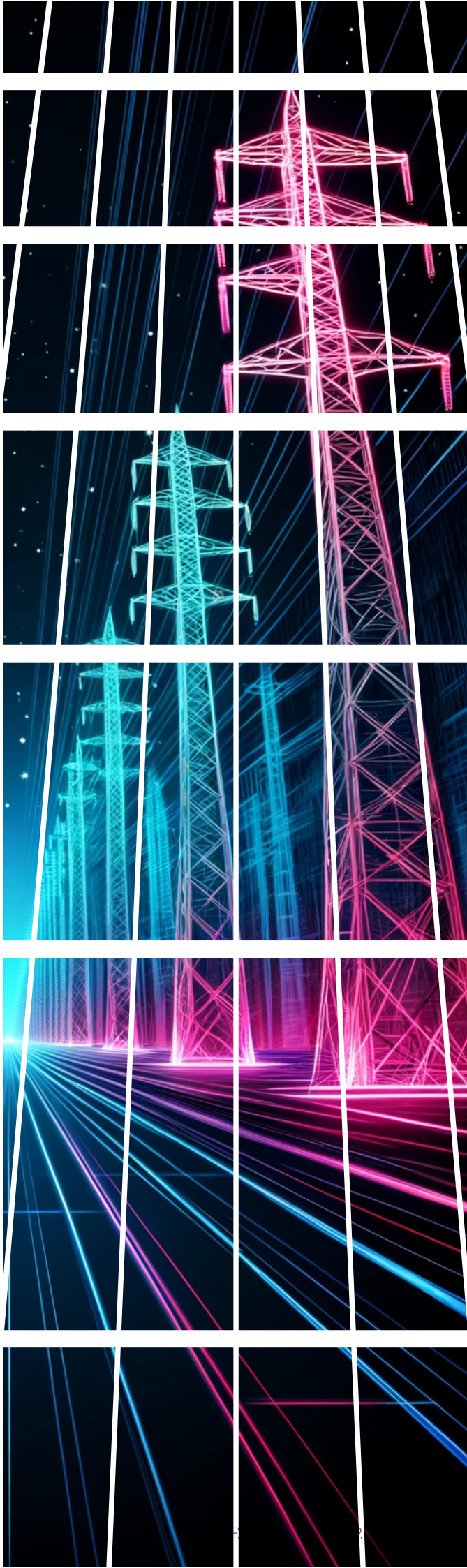
The current technology-related challenges will pass. Even though we are decades into the digital age, they are in many ways to be considered childhood diseases; if treated right through a combination of formal and informal approaches, they can be overcome. More will undoubtedly arise, but a population settled into an adequately, individually adjusted and customizable work/life situation will be better suited to face them.

6.2 The great unplug: Possible threats to the digital age

Over the course of a few decades the ideas, concepts and products of the digital age have steadily spread from dorm rooms, garages and tinkering labs to all-encompassing parts of everyday reality in every corner of the globe.

It is truly a paradigm shift on par with the industrial revolutions of the past. But there are dragons lurking above the figurative and allegorical clouds. Some of them are threatening existing realities, and some pose a serious threat to future possibilities. All of them might upend the entire digital sustainability framework we are trying to establish.

Digital technology does not run on wishful thinking and magic, even if it sometimes appears to do just that. It requires power, and lots of it. Red flags are being raised all over the world, not least in Norway, about the massive energy consumption that comes in the wake of digital transformation processes. Data is a precious commodity, arguably the “new oil”, and Statnett - the public system operator of the Norwegian energy grid - has issued warnings about a power shortage in large parts of Norway in just a few years (Klette, 2023).



MORE POWER: Big data consumes more and more energy month by month and year by year, and it’s not likely to ever stop. As of 2050, Norwegian data centers will likely consume close to 5% of the total domestic power output. That is a lot of wifi-connected refrigerators.

As of 2024, Norwegian data centers consume 0,7% of total domestic energy output. The Norwegian Water Resources and Energy Directorate predicts that the number will soar to 5% by 2050. Combined with a surge in public energy consumption (largely based on increased digital activity), it becomes crucial for each of us to consider how we use the internet, and what we use it for (Stenseng in Computerworld, 2024).

For a number of other European countries, it's even more dire. France, for example, spent 10% of its total energy output on digital consumption in 2020, a number that's expected to increase by 80% by 2050 (Ministère de la Culture, 2023).

In short: The very data-driven society we are trying to reinforce is in the danger of eating its own tail.

If that happens, decades of carefully constructed frameworks for work/life balance might be in danger. As will productivity, sustainability efforts and social constructs. Mitigating the issue will not be easy, as the influx of digital tools is now an inescapable and integral part of almost every single piece of proactive work we do. Even this thesis, albeit a microscopic piece of a very large picture, consumed countless watt hours to be securely stored on a server for months.

One antidote to energy-related challenges might ironically enough be AI. The power of AI has the ability to help us optimize a number of crucial parameters, but it's doubtful that it will be enough: As of 2024, with AI still in its relative infancy, it already consumes power comparable to that of a small country (Leffler, 2023).

Anything other than sweeping reform and strong-arm top-down regulation is looking to be akin to hand-inflating a punctured tire with the very air that's being expelled; it won't be enough, and it won't be sustainable.

LOOPING DEGRADATION: AI feeds on input, and is already basing "new" output on AI-generated data. That will make the fight against fake news harder.

As it stands, the most imminent technology-based threat is whether we can afford to use it.

Artificial Intelligence is troublesome in itself. Generative AI has been touted as the next big technological breakthrough, which will allow us to solve endless challenges, boost effectivity across all parts of society and, after a period of undoubtedly painful transitions, enable workers to do more with less, effectively setting the scene for an easier balancing of work/life scales.

It is only as smart as the data it bases results on, however, and concerns are already being voiced on the increasingly poorer data sets used to create "new" solutions. The internet is slowly being filled with auto-generated content; text, images, videos, code, analysis, reports and unverified facts. Those faked results are interpreted as real data sources by the next AI sweep, which in turn will produce increasingly artificial content based on it. And so the circle continues, with each iteration of content being based on less and less "real" data.

It's garbage in, garbage out, and comparable to a data-based version of the whisper challenge: it might be entertaining at first, but bad data in the wrong hands could cause a lot of damage, and possibly undo a number of the positive societal gains.

The list of tangible challenges related to technology itself is long, but the list of intangible challenges is equally long. Power consumption and zombie AI is just the tip of the iceberg. Technology opens up a world of possibilities, wider horizons and enables new evolutionary steps for mankind, especially if it is approached, understood, interpreted and regulated correctly, but it will be a bumpy ride.

Let's hope the digital natives of current and future generations will be able to examine both sides of the coin. Having a right to disconnect is not worth much when there's nothing to disconnect from.

6.3 The beat goes on

Life is indeed a funny proposition. We learn, we work, we strive and grasp, always looking for ways to do better, live better, make better and move forward. We can't win, but losing is not an option. From an outside perspective, the human struggle is fascinating, occasionally even comical. Seen through the prism of work/life, where the end goal is harmony and sustainability, it's frustrating. Occasionally infuriating.

The task of considering all the puzzle pieces, scale weights, opinions, experiences, presumptions, predictions and predicaments was daunting before we even started our journey, and it became progressively more complex along the way. Throughout our exploration we have tried our best to take in, consider, analyze and focus on what we believe to be the main contributing factors to a sustainable work/life balance in a digitally driven timeline that's changing fast.

We feel we succeeded in capturing the essence of the work/life conundrum, laying the groundwork for thoughts and questions - practical and philosophical - for the future, unpredictable as it may be. Still, regardless of the depth and breadth of perspectives we put on the board, and despite best efforts, the solution is tantalizingly open-ended. There is no finite answer. There never will be. But that's ok. The knowledge-gathering, the experience and the challenges ahead is curiously motivating.

The question of what constitutes a perfect work/life balance is as individual and fluctuating as life itself. It's a parable to chasing the horizon; always visible, but always out of reach. The influx of digital tools makes it both easier and harder, creating a paradox that can be loosely defined and standardized by regulation, but must be dealt with on an individual basis.

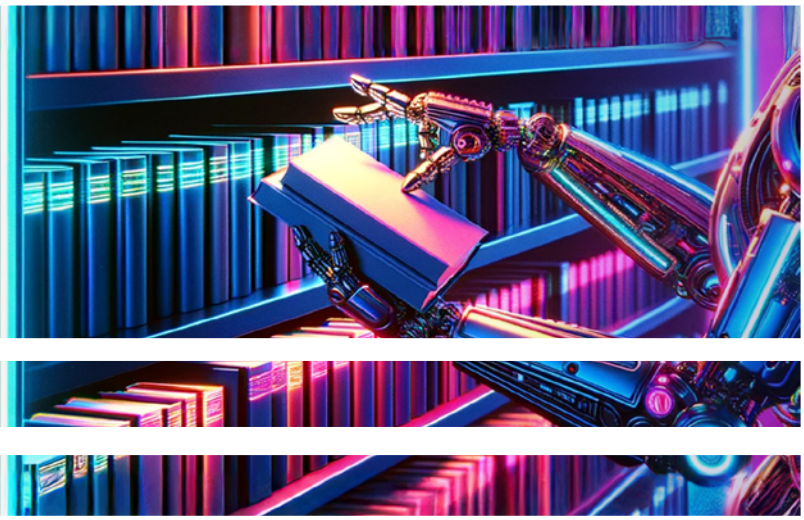
The digital tools designed to simplify our lives often end up complicating them, and the digital dependency is a blessing and a curse. They offer us infinite possibilities to expand our view of our horizon, which is undoubtedly tempting, but reality bites, and essential human responsibilities are relentlessly unchangeable.

How can we define the ideal weight of work versus perpetual human values? We can't. There is no one-size-fits-all solution. There is no final boss. There is no end to the scrolling. As technology expands and develops, so do our aspirations for work, life and results. The digital age confronts us with this every day, and we adapt. We adapt as individuals and as a society, and the constant reshaping of the landscape means we will never stop facing new variants of challenges and forcefully handle it to the best of our ability.

We have to accept the fact that the balance we all seek is not a destination.

It's a way of traveling.

References



- Andersen, E. P. (2023). *Paradokser og ambivalens. En masteroppgave om digitalisering og fleksibilitet i det norske arbeidslivet.* (Masteroppgave, Samfunnsvitenskapelig fakultet, Universitetet i Oslo). https://www.duo.uio.no/handle/10852/96085
- Anderson, M., Jiang, J. (2018). Teens, Social Media and Technology 2018. PEW Research Center. https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/
- Arbeidsforskningsinstituttet. (2023, Desember) *Slik taklet vi digital hjemmeskole og hjemmekontor.* https://www.oslomet.no/forskning/forskningsnyheter/slik-taklet-vi-digital-hjem-meskole-og-hjemmekontor
- Arbeidsmiljøloven. (2006). *Lov om arbeidsmiljø, arbeidstid og stillingsvern mv (LOV-2005-06-17-62).* Lovdata. https://lovdata.no/dokument/LTI/lov/2005-06-17-62
- Arbeidstilsynet. (2024, 14th of April). *Arbeidsrelaterte muskel- og skjelettplager* https://www.arbeidstilsynet.no/tema/arbeidsrelaterte-muskel--og-skjelettplager/ 255-279.
- Ariani, D. W., & Gunawan, H. (2017). The effect of job satisfaction and organizational commitment to turnover intention on lecturers. European Research Studies Journal, 20(1), 93-108. https://scholarship.law.nd.edu/ndjicl/vol9/iss1/3
- Babapour, C., Hultberg, A. & Yams, B.N. (2021). Post-pandemic office work: Perceived challenges and opportunities for a sustainable work environment. Sustainability, 14(1), 294.
- Bandura, A. (1971c). *Social learning theory.* New York: General Learning.Press
- Barber, L. K. & Santuzzi, A. M. (2015). Please respond ASAP: Workplace telepressure and employee recovery. *Journal of Occupational Health Psychology, 20(2)*, 172-189.
- Barrero, J. M., Bloom, N. & Davis, S. J. (2023). SWAA February 2023 Updates.*Why working from home will stick.* National Bureau of Economic Research Working Paper 28731. https://wfhresearch.com/wp-content/uploads/2023/02/WFHResearch_updates_February2023.pdf.
- Barrero, J. M., Bloom, N., & Davis, S. J. (2023). The evolution of work from home. *Journal of Economic Perspectives, 37(4)*, 23-49.
- Bartsch, D., Niederbacher, S. & Spaniol, S. (2020). The Influence of Social Media Use on Body Image Disturbance and Eating Disorders Among Adolescents: A Review of the Literature. *Journal of Adolescent Health, 67(6)*, 796-802.

- Beauchene, V., de Bellefonds, N., Duranton, S. & Mills, S. (2023, 7th of June). *AI at work: What people are saying.* Boston Consulting Group. https://www.bcg.com/publications/2023/what-people-are-saying-about-ai-at-work
- Beckel, J. L. O., Fisher, G. G. (2022). Telework and Worker Health and Well-Being: A Review and Recommendations for Research and Practice. *International Journal of Environmental Research and Public Health; 19(7),* 3879.
- Belkin, L. Y., Becker, W. J. & Conroy, S. A. (2020). The Invisible Leash: The Impact of Organizational Expectations for Email Monitoring After-Hours on Employee Resources, Well-Being, and Turnover Intentions. *Group & Organization Management, 45(5)*, 709-740. https://doi.org/10.1177/1059601120933143
- Benum, E. (2015, 25th of November). Arbeidsmiljø og arbeidsforhold i endring. https://www.norgeshistorie.no/oljealder-og-overflod/1937-arbeidsmiljo-og-arbeidsforhold-i-endring.html.
- Berger, D. L. (2023). Does work-life boundary management improve work-life balance for remote workers: A critically appraised topic. *Engaged Management Review: Vol. 7 (1)* , 2.
- Bergh, T., & Hjellum, T. (1981). The Norwegian Labour Movement and the State: Two Approaches. *Scandinavian Political Studies, 4(1)*, 29–53.
- Berry, N., Lobban, F., Belousov. M., Emsley, R., Nenadic, G. & Bucci, S. (2017). #WhyWeTweetMH: Understanding Why People Use Twitter to Discuss Mental Health Problems. *J Med Internet Res. 2017 Apr 5;19(4)*:e107. doi: 10.2196/jmir.6173. PMID: 28381392; PMCID: PMC5399219.
- Biocca, F. (1997). The cyborg's dilemma: Progressive embodiment in virtual environments. *Journal of Computer-Mediated Communication, 3(2).*
- Biron, M. & Boon, C. (2013). Consequences of the way in which we conceptualize and measure work/non-work interface behaviors. *Journal of Organizational Behavior, 34(5)*, 617-634.
- Blehm, C., Vishnu, S., Khattak, A., Mitra, S., Yee, R. W, & Lee, W. W. (2005). Computer vision syndrome: A review. *Survey of Ophthalmology, 50(3)*, 253-262.
- Bloomberg, J. (2018). Digitization, digitalization, and digital transformation: confuse them at your peril. *Forbes. Retrieved on August, 28, 2019.*
- Bochner, A.P. & Kelly, C.W. (1974). Interpersonal Competence: *Rationale, Philosophy, and Implementation of a Conceptual Framework; Interpersonal Communication Instruction--Theory and Practice;* A Symposium. Communication Education
- Boone, J.E., Gordon-Larsen, P., Adair, L.S. et al. Screen time and physical activity during adolescence: longitudinal effects on obesity in young adulthood. *Int J Behav Nutr Phys Act 4, 26* (2007). https://doi.org/10.1186/1479-5868-4-26

- Bowen, H. R., Gond, J.-P., & Bowen, P. G. (2013). Social Responsibilities of the Businessman (1st ed.). University of Iowa Press.
- Bower, (2022). *5 Strategies to Feel Less Alone Amid the Epidemic of Loneliness* (Forbes, 2022, July 24)
- Bowlby, J. (1969). *Attachment and Loss, Vol. 1*: Attachment. Attachment and Loss. New York: Basic Books
- Boyd, D. & Ellison, N. (2007). Social Network Sites: Definition, History, and Scholarship.
- Brady, W. J & Crockett, M. J (2019) How Effective Is Online Outrage?. *Trends in Cognitive Sciences, Volume 23, Issue 2, 2019*, 79-80
- Brage, S., Ihlebaek,C., Natvig, B.& Bruusgaard D. (2023).Muskel- og skjelettlidelser som årsak til sykefravær og uføreytelser [Musculoskeletal disorders as causes of sick leave and disability benefits]. *Tidsskr Nor Laegeforen. 2023 Dec 2;130(23)* 2369-70 doi: 10.4045/tidsskr.10.0236. PMID: 21139664.
- Brennen, J. S., & Kreiss, D. (2016). Digitalization. *The international encyclopedia of communication theory and philosophy,* 1-11.
- Brochmann, G. (1991). From Labor Aristocracy to Labor Movement: Union Organizing in Norway, 1890–1910. *International Labor and Working-Class History, 40*, 78–96.
- Brown, B. B. & Larson, J. (2009). *Peer Relationships in Adolescence.* In Handbook of Adolescent Psychology (2) 74-103. John Wiley & Sons.
- Buelens M., Van den Broeck, H. (2007). An analysis of differences in work motivation between public and private sector organizations. *Public Administration Review, 67(1)*, 65–74.
- Buffer. (2023). *State Of Remote Work 2023*. https://buffer.com/state-of-remote-work/2023
- Burke, R. J., Matthiesen, S. B. & Pallesen, S. (2006). Personality correlates with workaholism. *Personality and Individual Differences, 40(6)*, 1223-1233.
- Byron, K. (2005). A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behavior, 67(2)*, 169–198. https://doi.org/10.1016/j.jvb.2004.08.009
- Carraher-Wolverton, C. (2022). The co-evolution of remote work and expectations in a COVID-19 world utilizing an expectation disconfirmation theory lens. *Journal of Systems and Information Technology, 24(1)*, 55-69.
- Carter B., Rees, P., Hale, L., Bhattacharjee, D. & Paradkar, M.(2016). Association Between Portable Screen-Based Media Device Access or Use and Sleep Outcomes: A Systematic Review and Meta-analysis. *JAMA Pediatr. 2016 Dec 1;170(12)*:1202-1208. doi: 10.1001/jamapediatrics.2016.2341. PMID: 27802500; PMCID: PMC5380441.

- Chang, A. M., Aeschbach, D., Duffy, J. F. & Czeisler, C. A. (2015). Evening use of light-emitting eReaders negatively affects sleep, circadian timing, and next-morning alertness. *Proceedings of the National Academy of Sciences, 112(4)*, 1232-1237.
- Chatterjee, J. & Dethlefs, N. (2023). This new conversational AI model can be your friend, philosopher, and guide... and even your worst enemy. *Patterns, 4(1)*.
- Clark, A. E. (2005). Your money or your life: Changing job quality in OECD countries. *British Journal of Industrial Relations, 43(3)*, 377-400.
- Collin, S., Rowse, G.R., Martinez, A.P. & Bentall, R.P. (2023).Delusions and the dilemmas of life: A systematic review and meta-analyses of the global literature on the prevalence of delusional themes in clinical groups, *Clinical Psychology Review,Volume 104,2023*,102303,ISSN 0272-7358, https://doi.org/10.1016/j.cpr.2023.102303.
- Computerworld (2024, 20th of April) *Vi må diskutere hvor mye strøm du og jeg bruker i datasentre.* https://www.cw.no/ai-og-databehandling-datasentre-energiforbruk/vi-ma-diskutere-hvor-mye-strom-du-og-jeg-bruker-i-datasentre/2166522
- Datareportal (2024, 28th of February.) *DIGITAL 2024: NORWAY.* https://datareportal.com/reports/digital-2024-norway
- Davila J., Hershenberg R., Feinstein B.A, Gorman K., Bhatia V., Starr L.R.(2012). Frequency and Quality of Social Networking Among Young Adults: Associations With Depressive Symptoms, Rumination, and Corumination. *Psychol Pop Media Cult. 2012 Apr 1;1(2)*:72-86. doi: 10.1037/a0027512. PMID: 24490122; PMCID: PMC3907111.
- Deci, E. L., Olafsen, A. H. & Ryan, R. M.(2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior, 4*, 19-43.
- Deloitte (2022). *Striving for balance, advocating for change: The Deloitte Global 2022 Gen Z & Millennial Study.* https://www.deloitte.com/content/dam/assets-shared/legacy/docs/about/2022/deloitte-2022-genz-millennial-survey.pdf
- Demirci K., Akgönül, M. & Akpinar A. (2015). Relationship of smartphone use severity with sleep quality, depression, and anxiety in university students. *J Behav Addict. 2015 Jun;4(2)*, 85-92. doi: 10.1556/2006.4.2015.010. PMID: 26132913; PMCID: PMC4500888.
- Dempsey, A.E, O'Brien. K.D.,Tiamiyu, M.F & Elhai, J.D. (2019) Fear of missing out (FoMO) and rumination mediate relations between social anxiety and problematic Facebook use. *Addict Behav Rep. 2019 Apr 12;9*:100150. doi: 10.1016/j.abrep.2018.100150. PMID: 31193746; PMCID: PMC6542373.
- Derks, D., ten Brummelhuis, L. L., Zecic, D., & Bakker, A. B. (2016). Switching on and off...: Does smartphone use obstruct the possibility to engage in recovery activities? *European Journal of Work and Organizational Psychology, 25(2)*, 152-167.

- Deutsch, L. (2022, 22th of April). Tech Companies Face Billions in Fines Under EU Content Rules. *Bloomberg. https://www.bnnbloomberg.ca/tech-companies-face-billions-in-fines-under-eu-content-rules-1.1755396*
- Dietz-Uhler, B., et al. (2015). *Face-to-Face Versus Facebook: Does Exposure to Social Networking Web Sites Augment or Attenuate Physiological Arousal Among the Socially Anxious?* doi: 10.2196/jmir.6173 doi: 10.4045/tidsskr.10.0236. PMID: 21139664.
- Eisenberg, N., Cumberland, A. & Spinrad, T. L. (1998). Parental Socialization of Emotion. *Psychological Inquiry, 9(4)*, 241–273.
- Eisenberger, R., Malone, G. P. & Presson, W. D. (2016). Optimizing perceived organizational support to enhance employee engagement. I. In R. E. Johnson & C. E. Jackson (Eds.), *Micro-organizational behavior: Theories and research,* 59-80. Routledge.
- Eisenstein, M. (2022, 12 th of October). *Four ways that AI and robotics are helping to transform other research fields.* Nature.com. https://www.nature.com/articles/d41586-022-03209-2
- Elhai, J. D., Levine, J. C., Dvorak, R. D. & Hall, B. J. (2017). Non-social features of smartphone use are most related to depression, anxiety and problematic smartphone use. *Computers in Human Behavior, 69*, 75-82.
- Erozkan, A. (2013). The Effect of Communication Skills and Interpersonal Problem-Solving Skills on Social Self-Efficacy. *Educational Sciences: Theory & Practice, 13*, 739-745
- European Commission, (2021). *Europe's Digital Decade: digital targets for 2030.* https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en
- European Council, (2024. March 21). Timeline - Digital Europa. *https://www.consilium.europa.eu/en/policies/a-digital-future-for-europe/timeline-digital-europe/*
- Eveleigt, D.(2019, 13th of May). *Top Down or Bottom Up? A Change Management Perspective.* https://uk.linkedin.com/in/david-s-eveleigh?trk=article-ssr-frontend-pulse_publisher-author-card
- Fear, C. F. (2013). Recent developments in the management of delusional disorders. *Advances in Psychiatric Treatment. 2013;19(3)* 212-220. doi:10.1192/apt.bp.111.010082
- Fidjeland, T. G. (2022). *Foreldres erfaringer med bruk av digital helseteknologi til oppfølging av barn med overvekt og fedme – en integrative review* (Master thesis, University of Stavanger). https://hdl.handle.net/11250/3018185
- Field, T. (2010). Touch for socioemotional and physical well-being: A review,*Developmental Review, Volume 30, (4)*, 2010, 367-383. https://doi.org/10.1016/j.dr.2011.01.001.
- Fløgstad, H. (1999). The Trade Union Struggle for Equal Pay: The Case of Norway. *Labor History, 40(1)*, 53–68.

- Fokk , A. K. (2022, 7th of April). *Får du ikke overtidsbetalt? Det kan være ulovlig.* NITO. https://www.nito.no/medlemsfordel/case/juridisk-og-lonn/ingen-skal-jobbe-gratis-du-kan-ha-rett-pa-overtidsbetaling-ogsa-om-du-er-i-sarlig-uavhengig-stilling/
- Folkehelseinstituttet. (2023, 17th of August). Folkehelserapporten. *Psykiske plager og lidelser hos voksne.* https://www.fhi.no/he/folkehelserapporten/psykisk-helse/psykiske-lidelser-voksne/?term=#legemiddelbehandling-av-psykiske-lidelser
- Folkehelseinstituttet,(2023, November). *Folkehelseundersøkelen.* https://www.fhi.no/hs/fylkeshelseundersokelser/
- Folkehelseinstituttet. (2023, 13th of September). *Økning i ADHD-diagnoser for barn og unge under pandemien.* https://www.fhi.no/nyheter/2023/okning-i-adhd-diagnoser-for-barn-og-unge-under-pandemien
- Foss, L., Gravseth, H. M., Kristensen, P., Claussen, B., Mehlum, I. S., Knardahl, S. & Skyberg, K. (2011). The impact of workplace risk factors on long-term musculoskeletal sickness absence: a registry-based 5-year follow-up from the Oslo health study. *Journal of occupational and environmental medicine, 53(12)*, 1478-1482
- Francis, T., & Hoefel, F. (2018). *True Gen': Generation Z and its implications for companies.* McKinsey & Company, 12, 1-10.
- Frosio, G. F. (2017). *Reforming intermediary liability in the platform economy: A European digital single market strategy.* Nw. UL Rev. Online, 112, 18.
- Gajendran, R. S. & Harrison, D. A. (2007). *The Good, the Bad, and the Unknown About Telecommuting: Meta-Analysis of Psychological Mediators and Individual Consequences.*
- Galanti, T., Guidetti, G., Mazzei, E., Zappalà, S. & Toscano, F. (2021). Work from home during the COVID-19 outbreak: The impact on employees' remote work productivity, engagement, and stress. *Journal of occupational and environmental medicine, 63(7)*, 426-432.
- Garety, P.A.,Kuipers, E.,Fowler, D.,Freeman. D., Bebbington,P.E.(2001). A cognitive model of the positive symptoms of psychosis. *Psychol Med. 2001 Feb;31(2)*:189-95. doi: 10.1017/s0033291701003312. PMID: 11232907
- Gibbs, M.,Mengel, F.S. & Siemroth, C.(2021). *Work from Home & Productivity: Evidence from Personnel & Analytics Data on IT Professionals*. SSRN Electronic Journal. 10.2139/ssrn.3841567.
- Global Workplace Analytics (2020). Remote Work, Hybrid Work, In-Office Work Forecast https://globalworkplaceanalytics.com/work-at-home-after-covid-19-our-forecast
- Godfrey, A., Hetherington, V., Shum, H., Bonato, P., Lovell, N. H. & Stuart, S. (2018). From A to Z: Wearable technology explained. *Maturitas, 113*, 40-47.

- Goldberg, E. (2021, 28 th of October). The 37-Year-Olds Are Afraid of the 23-Year-Olds Who Work for Them. *New York Times*. www.nytimes.com/2021/10/28/business/gen-z-workplace-culture.html?smid=url-share
- Gong, C. & Ribiere, V. (2021). Developing a unified definition of digital transformation. *Technovation, 102*, 102217. https://doi.org/10.1016/j.technovation.2020.102217
- Gowrisankaran S. ,& Sheedy, J.E.(2015). Computer vision syndrome: A review. *Work*. 2015;52(2) 303-14. doi: 10.3233/WOR-152162. PMID: 26519133.
- Gradisar, M., Wolfson A.R., Harvey A.G., Hale L., Rosenberg, R.& Czeisler, C.A. (2013). The sleep and technology use of Americans: findings from the National Sleep Foundation's 2011 Sleep in America poll. *J Clin Sleep Med. 2013 Dec 15;9(12)*:1291-9. doi: 10.5664/jcsm.3272. PMID: 24340291; PMCID: PMC3836340G
- Grant, A. M. & Sonnentag, S. (2010). Doing good buffers against feeling bad: Prosocial impact compensates for negative task and self-evaluations. *Organizational Behavior and Human Decision Processes, 111(1)*, 13–22.
- Greenhaus, J. H. & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review, 10(1)*, 76-88.
- Guest, D. E. (2002). Perspectives on the study of work-life balance. *Social Science Information, 41*, 255-279.
- Haidt, J., Rausch, Z. & Twenge, J. (ongoing). *Social media and mental health: A collaborative review.* Unpublished manuscript, New York University. Accessed at tinyurl.com/SocialMediaMentalHealthReview
- Hall, J. A. (2018). When is social media use social interaction? Defining mediated social interaction. *New Media & Society, 20(1)*, 162-179. https://doi.org/10.1177/1461444816660782
- Hanko, K.(2022, 8th of April) 35+ Must-Know Phone Usage Statistics for 2022. *Clario* https://clario.co/blog/phone-usage-statistics/
- Harper, C. L., & Leicht, K. (2018). *Exploring social change: America and the world*. Routledge, 2018.
- Hendrycks, D., Mazeika, M. & Woodside,T. (2023). *An overview of catastrophic AI risks*. https://doi.org/10.48550/arXiv.2306.12001
- Hetler, A. (2022). *Quiet quitting explained: Everything you need to know.* https://www.techtarget.com/whatis/feature/Quiet-quitting-explained-Everything-you-need-to-know
- Hills, A.P, Hennig, E.M.,McDonald, M. & Bar-Or, O.(2001). Plantar pressure differences between obese and non-obese adults: a biomechanical analysis. *Int J Obes Relat Metab Disord. 2001 Nov;25(11)*:1674-9. doi: 10.1038/sj.ijo.0801785. PMID: 11753590.
- Hilton, B. (2023, March). *Preventing an AI-related catastrophe.* 80000hours.com. Retrieved from https://80000hours.org/problem-profiles/artificial-intelligence

- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-Related Values.* Beverly Hills, CA: Sage Publications
- Hossain, Z. & Nandi, S. (2010). Role of Family in Socialization and Education. *Anthropologist, 12(2),* 131-136. https://doi.org/10.1016/1053-4822(91)90011-Z.
- Richey, B., Wally, S.(1998). Strategic human resource strategies for transnationals in Europe,
- Human Resource Management Review, Volume 8, Issue 1, 1998, 79-97. https://doi.org/10.1016/S1053-4822(99)80040-0.
- Hysing, M., Pallesen. S., Stormark, K.M., Lundervold, A.J.,Sivertsen. B.(2013). Sleep patterns and insomnia among adolescents: a population-based study. *J Sleep Res. 2013 Oct;22(5)*:549-56. doi: 10.1111/jsr.12055. Epub 2013 Apr 24. PMID: 23611716.
- Iberdrola.com (2024). *Characteristics of generations X, Y and Z*. Retrieved from www.iberdrola.com/talent/generation-x-y-z
- Ingelsrud, M. H., Aksnes, S. Y., Bernstrøm, V. H., Egeland, C., Hansen, P. B., Pedersen, E., & Weitzenboeck, E. M. (2022). *Hjemme–Borte-Uavgjort. Hjemmekontor og annet fjernarbeid: Kartlegging av omfang, utviklingstrekk og konsekvenser* (oda.oslo met.no), AFI-rapport 2022:04 ISSN 0747-5632.
- Lee, J, Ahn, S.& Min, H.K .(2020). Psychological characteristics and addiction propensity according to content type of smartphone use, *International Journal of Environmental Research and Public Health, vol. 17, no. 7*, 2292, 2019
- Jacobsen, D.I. (2004) *Organisasjonsendringer og endringsledelse*, Fagbokforlaget. Bergen
- Jahnel, T., Dassow, H.H., Gerhardus, A. & Schüz, B. (2022). The digital rainbow: Digital determinants of health inequities. *Digital Health, 8*, 20552076221129093.
- Janssen, Martin, A., Hughes, A.R., Hill, C.M., Kotronoulas, G. & Hesketh, K.R. (2020). Associations of screen time, sedentary time and physical activity with sleep in under 5s: A systematic review and meta-analysis. *Sleep Med Rev. 2020 Feb;49*:101226. doi: 10.1016/j.smrv.2019.101226. Epub 2019 Nov 1. PMID: 31778942; PMCID: PMC7034412.
- Jawabri, A., Alarmoti, A. & Rehman, W. (2022). Impact of remote working environment on employee motivation, engagement, and job satisfaction: a study of service sector from the UAE. *Business and Economic Research, 12(1)*, 82-98.
- Jong. D., Chen, S.,Ruangkanjanases, A. & Chang, Y (2021, 28th of July) The Impact of Social Media Usage on Work Efficiency: The Perspectives of Media Synchronicity and Gratifications. *Frontiers. Organizational Psychology. Vol. 12.* https://doi.org/10.3389/fpsyg.2021.693183
- Judge, T. A., Bono, J. E., Erez, A. & Locke, E. A. (2001). Core self-evaluations and job and life satisfaction: The role of self-concordance and goal attainment. *Journal of Applied Psychology, 86(1)*, 80.

- Kane, G.C., Palmer, D., Phillips, A.N., Kiron, D. & Buckley, N. (2017). *Achieving digital maturity*. MIT Sloan Management Review.
- Kantar Profiles (2023). *Community report: Connecting with the workforce.* https://kantar.turtl.co/story/connecting-with-the-workforce-2023/page/1?utm_campaign=2023%20CWP%20Workforce&utm_source=press
- Kim, J. H., Kim, J. T., & Kang, S. W. (2016). Musculoskeletal symptoms and computer use among Korean adolescents. *Journal of School Health, 86(12)*, 895-903
- Klette, E. T.(2023, 10th January) Norge har ikke nok strøm i 2027: – *En selvpåført katastrofe https://frifagbevegelse.no/magasinet-industri-energi/norge-har-ikke-nok-strom-i-2027--en-selvpafort-katastrofe-6.158.928482.882ece832b*
- Kohler Inc. (2024). *Smart toilets.* Retrieved from https://www.kohler.com/en/products/smart-home/shop-smart-toilets
- Konrath, S. (2013). The empathy paradox: Increasing disconnection in the age of increasing connection. In R. Luppicini (Ed.), *Handbook of research on technoself: Identity in a technological society* (204–228). Information Science Reference/IGI Global. https://doi.org/10.4018/978-1-4666-2211-1.ch012
- Koutamanis, M.,Vossen H. G. H., Peter, J.& Valkenburg, P.V (2013). Practice makes perfect: The longitudinal effect of adolescents' instant messaging on their ability to initiate offline friendships,- C*omputers in Human Behavior,Volume 29, Issue 6, 2013,* 2265-2272.
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J. N., Helgeson, V., & Crawford, A. M. (2002). Internet paradox revisited. *Journal of Social Issues, 58(1)*, 49–74. https://doi.org/10.1111/1540-4560.00248
- Kylili, A., Afxentiou, N., Georgiou, L., Panteli, C., Morsink-Georgalli, P. Z., Panayidou, A. & Fokaides, P. A. (2020). The role of Remote Working in smart cities: lessons learnt from COVID-19 pandemic. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 1-16.
- La Greca, A. M. & Harrison, H. M. (2005). Adolescent Peer Relations, Friendships, and Romantic Relationships: Do They Predict Social Anxiety and Depression? *Journal of Clinical Child and Adolescent Psychology, 34(1)*, 49–61. https://doi.org/10.1207/s15374424jccp3401_5
- Lapidot-Lefler, N., & Barak, A. (2012). Effects of anonymity, invisibility, and lack of eye-contact on toxic online disinhibition. *Computers in Human Behavior, 28(2)*, 434–443. https://doi.org/10.1016/j.chb.2011.10.014
- Lee, D., & Yoon, S. N. (2021). Application of artificial intelligence-based technologies in the healthcare industry: Opportunities and challenges. *International journal of environmental research and public health, 18(1)*, 271.

- Lee, P., S., N., Leung, L., Lo, V., Xiong, C. & Wu, T. (2011). Internet Communication Versus Face-to-face Interaction in Quality of Life. *Social Indicators Research, 100*,
- Leffler, L. (2023, 13th of October). The AI Boom Could Use a Shocking Amount of Electricity. *Scientific American.* https://www.scientificamerican.com/article/the-ai-boom-could-use-a-shocking-amount-of-electricity/
- Leroux, L. (2017). *Right to Disconnect: France Allows Workers to Turn Off, Tune Out.* Reuters. https://www.reuters.com/article/us-france-labor-emails-i
- Levenson, J. C., Shensa, A., Sidani, J. E., Colditz, J. B., & Primack, B. A. (2023). The association between social media use and sleep disturbance among young adults. *Preventive medicine, 85*, 36-41.
- Linkedin.(2023, November). *Future of work report: AI at Work.* https://economicgraph.linkedin.com/research/future-of-work-report-ai
- Lobschat, L., Mueller, B., Eggers, F., Brandimarte, L., Diefenbach, S., Kroschke, M., & Wirtz, J. (2021). Corporate digital responsibility. *Journal of Business Research, 122,* 875-888.
- Lockton Global Compliance, 2019, 10th of December). South Korea implements work-life balance reforms. *Employment practices* https://globalnews.lockton.com/south-korea-implements-work-life-balance-reforms/
- London, M., Sessa, V. & Shelley, L. (2022). Developing Self-Awareness: Learning Processes for Self- and Interpersonal Growth. *Annual Review of Organizational Psychology and Organizational Behavior. 10.* 10.1146/annurev-orgpsych-120920-044531.
- Lu, Y., & Zheng, X. (2020). 6G: A survey on technologies, scenarios, challenges, and the related issues. *Journal of Industrial Information Integration, 19(1).*
- Lyzwinski L. N. (2024). Organizational and occupational health issues with working remotely during the pandemic: a scoping review of remote work and health. *Journal of occupational health, 66(1)*, uiae005. https://doi.org/10.1093/joccuh/uiae005
- Madsen, O.J. (2020). *Deconstructing Scandinavia's Achievement Generation: A Youth Mental Health Crisis?*. Palgrave Macmillan.
- Makridakis, S., & Christodoulou, K. (2019). Blockchain: Current Challenges and Future Prospects/ Applications. *Future Internet, 11(12),* 258.
- Mantracare (2023, 20th of April) *What is Psychological Change ? Everything You need to Know.* https://mantracare.org/therapy/what-is/psychological-change/
- Markussen, T. (2017, 10th of January) *Arbeidsgivere krever fleksible ansatte. Sjefen forventer svar på e-post – også på kvelden.* https://frifagbevegelse.no/nyheter/sjefen-forventer-svar-pa-epost--ogsa-pa-kvelden-6.158.439456.b43c275162

- McDaniel, B.T.(2019). Parent distraction with phones, reasons for use, and impacts on parenting and child outcomes: A review of the emerging research. *Hum Behav & Emerg Tech. 2019; 1*: 72–80. https://doi.org/10.1002/hbe2.139
- McKinsey (2023, August 1). *The state of AI in 2023: Generative AI's breakout year.* https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-in-2023-generative-ais-breakout-year
- Medietilsynet (2022). *Barn og medier 2022- en undersøkelse om 9-18 åringers medievaner.* https://www.medietilsynet.no/globalassets/publikasjoner/barn-og-medier-undersokelser/2022/231002_barn-og-medier_2022.pdf
- Meyer. J.P. & Allen, N.J (1991) A three-component conceptualization of organizational commitment. *Human Resource Management Review,Volume 1, (1)* 61-89. https://doi.org/10.1016/1053-4822(91)90011-Z.
- Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A. & Baltes, B. B. (2011). Antecedents of work–family conflict: A meta-analytic review. *Journal of Organizational Behavior, 32(5),* 689-725.
- Ministère de la Culture (2023). *Adopting digital sobriety in the management of cultural structures.* Official French Ministry of Culture. https://www.culture.gouv.fr/en/Thematic/Ecological-transition/Adopting-digital-sobriety-in-the-management-of-cultural-structures
- NAV (2023, 30th of November).*Sykefraværet økte i 3. kvartal, størst økning i psykiske lidelser.* Pressemelding. https://www.nav.no/no/nav-og-samfunn/statistikk/sykefravar-statistikk/nyheter/sykefravaeret-okte-i-3.kvartal-storst-okning-i-psykiske-lidelser
- Natvig, B. (2023). *Musculoskeletal pain. From humdrum nuisance to chronic, disabling disease.*(Doktorgradsavhandling, Institutt for allmennmedisin og samfunnsmedisinske fag. https://tidsskriftet.no/2002/02/doktoravhandlinger/muskelsmerter.
- Nelson, L. J., Coyne, S.M.,Howard. E. & Clifford, B.N. (2016). Withdrawing to a virtual world: Associations between subtypes of withdrawal, media use, and maladjustment in emerging adults. *Developmental Psychology, 52(6),* 933–942.
- Nesi, J.,Choukas-Bradley. S. & Prinstein, M.J.(2018). Transformation of Adolescent Peer Relations in the Social Media Context: Part 1-A Theoretical Framework and Application to Dyadic Peer Relationships. *Clin Child Fam Psychol Rev. 2018 Sep;21(3)* 267-294. doi: 10.1007/s10567-018-0261-x. PMID: 29627907; PMCID: PMC6435354.
- Nwankpa, J. K., & Datta, P. M. (2023). Remote vigilance: The roles of cyber awareness and cybersecurity policies among remote workers. *Computers & Security, 130*, 103266.
- OECD (2021, December). *Artificial Intelligence and Employment. Organization for Economic Co-operation and Development* https://www.oecd.org/future-of-work/reports-and-data/AI-Employment-brief-2021.pdf

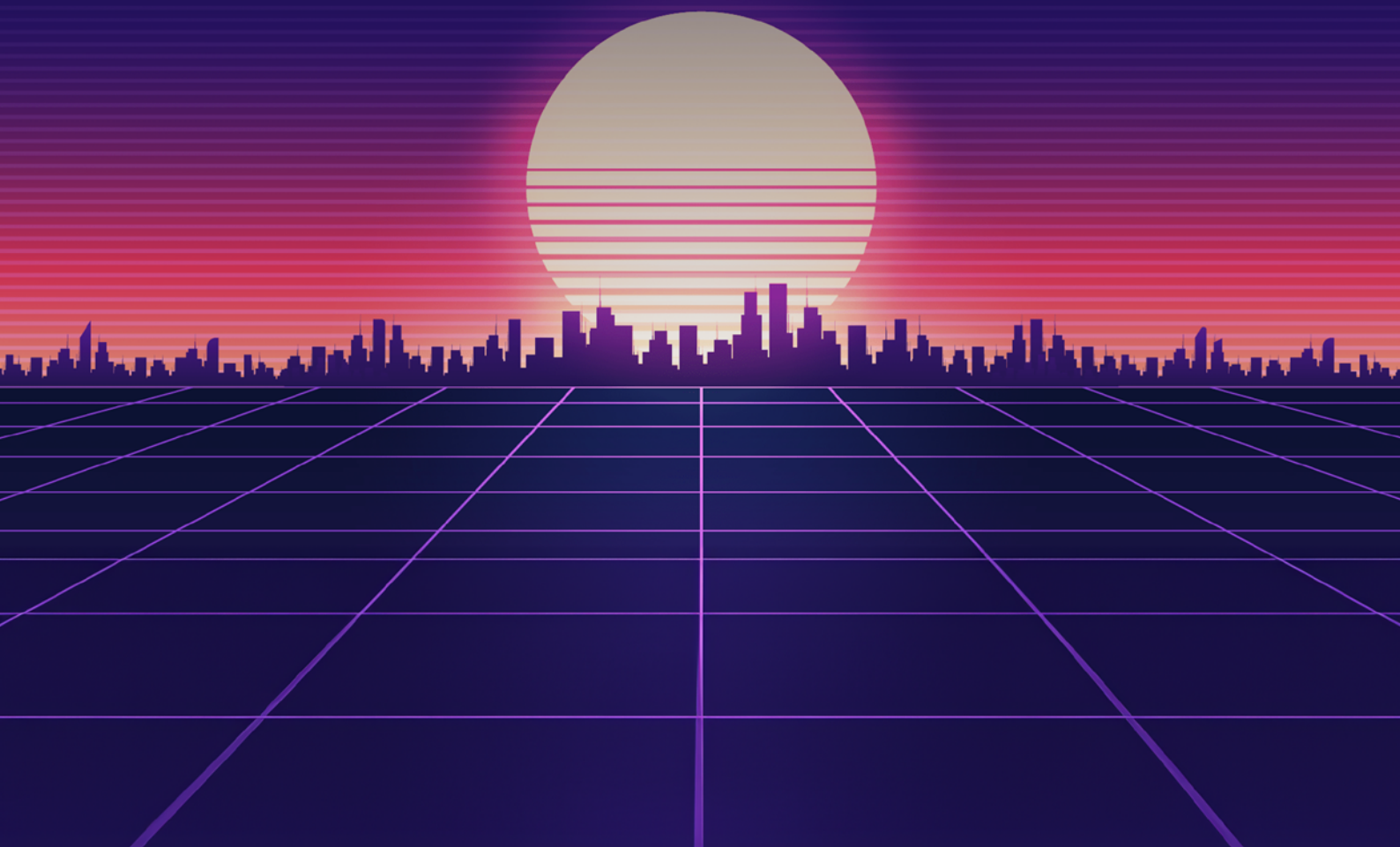
- Orbik, Z., & Zozuľaková, V. (2019). Corporate social and digital responsibility. *Management Systems in Production Engineering, 27(2)*, 79-83.
- Orrick, (2024, 12th of January) Employment Law & Litigation. https://www.orrick.com/en/Practices/Employment-Law-and-Litigation
- Pandey, E. (2022, February 22). *Women, people of color are happier working from home.* Axisos.com. https://www.axios.com/2022/02/22/unequal-return-office-hybrid-women-people-of-color
- Parker, K. & Igielnik, R. (2020, 4th of May). *On the Cusp of Adulthood and Facing an Uncertain Future: What We Know About Gen Z So Far.* PEW Research Center. www.pewresearch.org/social-trends/2020/05/14/on-the-cusp-of-adulthood-and-facing-an-uncertain-future-what-we-know-about-gen-z-so-far-2/
- Parks, A. C., & Layous, K. (2016). Positive psychological interventions. In Norcross, J. C., VandenBos, G. R., Freedheim,D. K. & Krishnamurthy, R. (Eds.), *APA handbook of clinical psychology: Applications and methods* (439–449). American Psychological Association. https://doi.org/10.1037/14861-023
- Pillai, S.V. & Prasad, J. (2023). Investigating the key success metrics for WFH/remote work models. *Industrial and Commercial Training, 55 (1)* 19-33.
- Plumridge, N. (2022, April 13). *Communication: Online vs. Face-to-Face Interactions* https://psychminds.com/communication-online-vs-face-to-face-interactions/
- Press, G. (2024, 4th of February). *Gen Z: Statistics, Data and Trends* (2024) whatsthebigdata.com/gen-z-statis/
- Primack B. A., Shensa A., Sidani J. E., Whaite E. O., Lin, L.Y., Rosen D. & Miller E. (2017). Social media use and perceived social isolation among young adults in the U.S. *American Journal of Preventative Medicine, 53,* 1–8 Psychologist, 45, 240-51.
- Radesky, J.S., Kistin, C.J., Zuckerman, B., Nitzberg, K., Gross, J.,Kaplan-Sanoff, M., Augustyn M. & Silverstein, M. (2014). Patterns of mobile device use by caregivers and children during meals in fast food restaurants. *Pediatrics. 2014 Apr;133(4)*:e843-9. doi: 10.1542/peds.2013-3703. Epub 2014 Mar 10. PMID: 24616357.
- Rapoport, R., Bailyn, L., Fletcher, J. K. & Pruitt, B. H. (2002). *Beyond Work-Family Balance: Advancing Gender Equity and Workplace Performance.* San Francisco, CA: Jossey-Bass.
- Ripplematch, (2023). What Gen Z Wants: How to Build an Organization That Attracts and Retains the Next Generation of Talent. Ripplematch.com
- Rosen, L. D., & Lim, A. F. (2020). *Task switching and multitasking in the digital age.* The Oxford Handbook of Multitasking, 59-74.

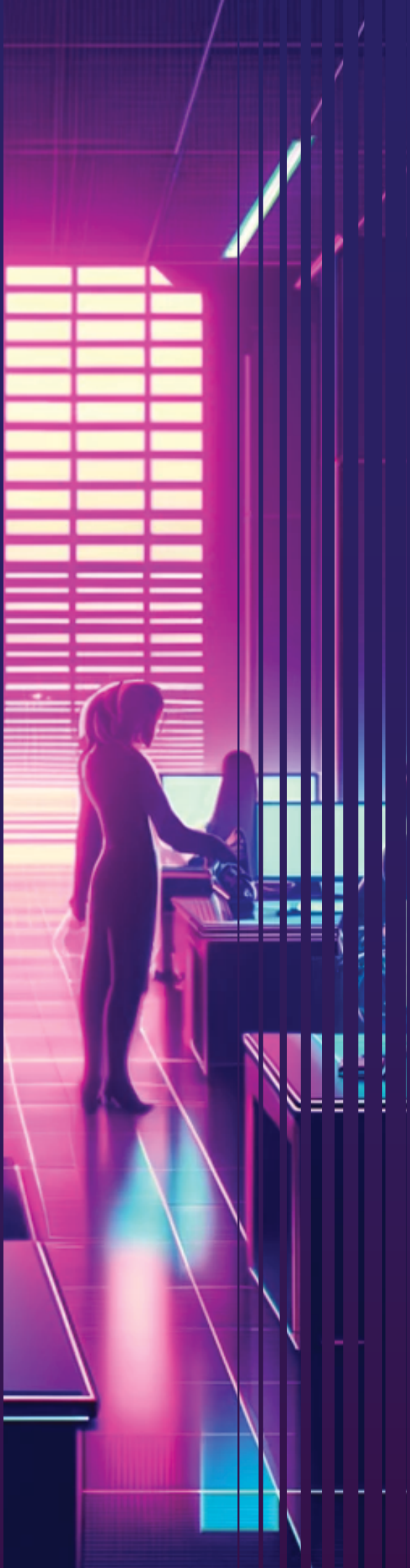
- Rosen, L. D., Whaling, K., Rab, S., Carrier, L. M., & Cheever, N. A. (2013). Is Facebook creating "iDisorders"? The link between clinical symptoms of psychiatric disorders and technology use, attitudes and anxiety. *Computers in Human Behavior, 29(3)*,
- Roser, M. (2022, 12th December). How has AI developed over the years and what's next? *World Economic Forum*. https://www.weforum.org/agenda/2022/12/how-ai-developed-whats-next-digital-transformation/
- Roser, M. (2023, 27th February). This timeline charts the fast pace of tech transformation across centuries. *World Economic Forum.* www.weforum.org/agenda/2023/02/this-timeline-charts-the-fast-pace-of-tech-transformation-across-centuries
- Rotondi, V., Stanca, L., & Tomasuolo, M. (2017). Connecting alone: Smartphone use, quality of social interactions and well-being. *Journal of Economic Psychology, 63*, 17–26. https://doi.org/10.1016/j.joep.2017.09.001
- Sander, K (2023). *Endringsledelse og endringsprosesser* - eStudie.no
- Sardeshmukh, S. R., Sharma, D., & Golden, T. D. (2012). Impact of telework on exhaustion and job engagement: A job demands and job resources model. *New Technology, Work and Employment, 27(3)*, 193-207.
- Schneider, F. W., Gruman, J. A., & Coutts, L. M. (2012). *Applied Social Psychology: Understanding and Addressing Social and Practical Problems.* (Second ed), Thousand Oaks, CA: SAGE
- Secunda, P. M. (2019) "The Employee Right to Disconnect," Notre Dame *Journal of International & Comparative Law: Vol. 9: Iss. 1, Article 3*.
- Singh, J., Steele, K., & Singh, L. (2021). Combining the Best of Online and Face-to-Face Learning: Hybrid and Blended Learning Approach for COVID-19, Post Vaccine, & Post-Pandemic World. *Journal of Educational Technology Systems, 50(2)*, 140-171. https://doi.org/10.1177/00472395211047865
- Smith, J. K., & Johnson, L. M. (2020). The Positive Impact of Digital Flexibility on Work-Life Balance. *Journal of Occupational Health Psychology, 35(2)*, 142-156.
- Smith, M., Segal, J., Robinson, L., & Segal, R. (2019, June). *Burnout prevention and treatment: Techniques for dealing with overwhelming stress.* Retrieved from https://www.helpguide.org/articles/stress/burnout-prevention-and-recovery.htm.
- Sparling, T.M, Henschke, N., Nesbitt, R.C. & Gabrysch, S. (2017). The role of diet and nutritional supplementation in perinatal depression: a systematic review. *Matern Child Nutr. 2017 Jan;13(1)*:10.1111/mcn.12235. doi: 10.1111/mcn.12235. Epub 2016 Feb 3. PMID: 26840379; PMCID: PMC6865932.
- Speakman, J. R., Sørensen, T. I. A., et al. (2023). Unanswered questions about the causes of obesity. *Science*, 2023.

- Statistisk sentralbyrå (2023, Desember) *Arbeidskraftundersøkelsen.* https://www.ssb.no/arbeid-og-lonn/sysselsetting/statistikk/arbeidskraftundersokelsen
- Stavanger Aftenblad (2024, 19th of March). *Amerikansk psykolog slår alarm: Vil forby smarttelefoner for alle under 14 år* https://www.aftenbladet.no/lokalt/i/abgyL5/amerikansk-psykolog-slaar-alarm-vil-forby-smarttelefoner-for-alle-under-14-aar
- Stich, J., Tarafdar, M., Cooper, C. L., & Stacey, P. (2018). Workplace stress from actual and desired computer-mediated communication use: a multi-method study. *New Technology, Work & Employment, 32(1*), 84-100. https://doi.org/10.1111/ntwe.12079
- Sundqvist, J. (2018). Hvor gikk det galt for Generasjon Prestasjon? *Psykologisk.no* https://psykologisk.no/2018/11/hvor-gikk-det-galt-for-generasjon-prestasjon/
- Tarafdar, M., Gupta, A., & Turel, O. (2019). The dark side of information technology. *MIT Sloan Management Review, 60(4)*, 23-30.
- Tardanico, S. (2012). Is Social Media Sabotaging Real Communication? *Forbes*. Forbes Magazine, 30 Apr. 2012. Web. 05 Mar. 2016.
- Thompson, E. P. (1967). Time, work-discipline, and industrial capitalism. *Past & Present, 38(1)*, p 56-97.
- Tomašev, N., Cornebise, J., Hutter, F., Mohamed, S., Picciariello, A., Connelly, B. & Clopath, C. (2020). AI for social good: unlocking the opportunity for positive impact. *Nature Communications, 11(1)*, p 2468.
- Torvatn, H., Kløve, B., & Landmark, A. (2023). *Sintef rapport -Ansattes syn på digitalisering (En nasjonal kartlegging 2017:00681; s. 53)*. Sintef. https://sintef.brage.unit.no/sintefxmlui/bitstream/handle/11250/2490540/Rapportnr%2b2017%2b00681%2bprint%2bv ersjon.pdf?sequence=1&isAllowed=y
- Tryggkurs, 2023. *HSE-course for managers – HMS-kurs for ledere på engelsk* - Trygg Kurs AS). https://www.tryggkurs.no/hms/mandatory-hse-training-for-employers-1-day/
- Turkle, S. (2015). *Reclaiming Conversation: The Power of Talk in a Digital Age.* Penguin, 2016).
- Twenge J. M., Martin G. N., Campbell W. K. (2018). Decreases in psychological well-being among American adolescents after 2012 and links to screen time during the rise of smartphone technology. Emotion, 18, 765–780.
- Twenge, J. M. (2017). *IGen: Why today's super-connected kids are growing up less rebellious, more tolerant, less happy-- and completely unprepared for adulthood (and what this means for the rest of us)*. New York: Atria. http://dx.doi.org/10.1111/fcsr.12345
- Yaga, D., Mell, P., Roby, N., & Scarfone, K. (2018). *Blockchain Technology Overview.* National Institute of Standards and Technology Internal Report, 8202(1)

- Yang, L., Holtz, D., Jaffe, S., Suri, S., Sinha, S., Weston, J., Joyce, C., Shah, N., Sherman, K., Hecht, B. & Teevan, J. (2022). The effects of remote work on collaboration among information workers. *Nature human behavior, 6(1)*, 43-54.
- Yu, J., & Wu, Y. (2021). The impact of enforced working from home on employee job satisfaction during COVID-19: An event system perspective. *International journal of environmental research and public health, 18(24)*, 13207
- Zedeck, S., & Mosier, K. (1990). Work in the family and employing organization. *AmericanPsychologist, 45*, 240-51.

Shut down. **Recharge.**
Change the world tomorrow.





Acknowledgements

Bjarte Ravndal
Aslaug Mikkelsen
Ola Kvaløy
Mari Rege
Håkon Brydøy
Øystein D. Fjeldstad
Kenneth H Wathne
Rune T. By
Torfinn Harding
Anders Åkermann
Espen Olsen
Mette H. Høgsand
Rune M. Løwehr
Jens Hetland
Torgeir M. Waterhouse
Ole J. Madsen
Lars Bratsberg
Karianne Borgen
Ove Ryland
Per Ove Stålesen
Frode Aardal
Gunn Elin Birkenes

CHANGE & CHANGEABILITY

University of Stavanger